DOCUMENT RESUME

ED 292 280 EC 202 063

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TITLE Characteristics of Limited English Proficient Hispanic Students Served in Programs for the Speech and Language Handicapped: Implications for Policy, Practice and Research. Part III.
INSTITUTION Texas Univ., Austin. Dept. of Special Education.
SPONS AGENCY Office of Vocational and Adult Education (ED). Washington, DC. Div. of National Vocational Programs.
PUB DATE 30 Sep 86
CONTRACT 300-83-0272
NOTE 85p.; For Part I, see ED 267 578; Part II, see ED 290 309.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Board of Education Policy; Communication Disorders; *Delivery Systems; *Disabilities; Educational Diagnosis; Educational Practices; Elementary Education; *Handicap Identification; *Hispanic Americans; Language Proficiency; Learning Disabilities; *Limited English Speaking; Referral; School Districts; Spanish Speaking; Special Education; Speech Handicaps; Speech Pathology; Student Evaluation; *Student Placement; Therapists
IDENTIFIERS Texas

ABSTRACT

This document is Part III of a research study examining special education service delivery for limited English proficient (LEP) Hispanic students who have been placed in programs for the learning-disabled, speech handicapped, and mentally retarded. The objectives of Part III of this study were: (1) identify the characteristics of Hispanic students referred, assessed, and placed in speech and/or language handicapped programs; (2) examine district policies and practices governing special education services for LEP students; (3) determine implications for improving policies and practices in the referral, assessment, and placement of these students; and (4) suggest future research directions. Speech and or/language handicapped LEP Hispanic students (n=124) in grades 2-5 in three large urban school districts in central Texas provided the sample. Descriptive statistical procedures were used to analyze data on student demography, referral, eligibility, speech and language evaluations, and placement. Results indicated that the procedures used by speech and language pathologists in the identification and diagnosis of communication disorders virtually ignored students' LEP status. Analysis of school district policies showed that little information was provided concerning safeguards to protect LEP students from being inappropriately placed in special education. Preliminary recommendations for delineating policy and improving practice are offered. A 90-item reference list is included. (JDD)

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ED292280

PART III

CHARACTERISTICS OF LIMITED ENGLISH PROFICIENT HISPANIC STUDENTS SERVED IN PROGRAMS FOR THE SPEECH AND LANGUAGE HANDICAPPED: IMPLICATIONS FOR POLICY, PRACTICE AND RESEARCH

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This is Part III of a research study examining special education service delivery in three school districts for LEP Hispanic students who are placed in programs for the learning disabled, speech handicapped, and mentally retarded. (U. S. Department of Education, Contract No. 300-83-0272)

Handicapped Minority Research Institute
on Language Proficiency
Department of Special Education
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The University of Texas at Austin

September 30, 1986

EC 210663

Acknowledgment

The involvement of staff and students of the Handicapped Minority Research Institute and of the Bilingual Special Education Training Program, The University of Texas at Austin, is acknowledged and appreciated.

Naomi Breed

Carolyn Brown

Lucy Cruz

Roland Martinez

The research reported herein was supported by the U.S. Department of Education (Contract No. 300-83-0272). However, the opinions expressed here do not necesesarily reflect the position or policy of the U.S. Department of Education, and no official endorsement by the Department should be inferred.

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I

INTRODUCTION

The Department of Special Education, College of Education, at The University of Texas at Austin has established a Handicapped Minority Research Institute on Language Proficiency (HMRI) to conduct research specific to exceptional limited English proficient (LEP) and bilingual students (English/Spanish). The Institute, funded under a contract with the United States Department of Education, Office of Special Education and Rehabilitative Services, is exploring the interaction of language proficiency and handicapping conditions, with a focus on Hispanic students who are learning disabled, mentally retarded, or communication disordered.

The following report is Part III of a larger HMRI research study which examines special education services provided by three Texas school districts for limited English proficient Hispanic students in programs for the learning disabled (LD), speech and/or language handicapped (SLH), or mentally retarded (MR). Part III addresses the identification and placement of LEP Hispanic students in programs for the speech and language handicapped. Parts I and II address the identification and placement of LEP students in LD and MR programs respectively.

The objectives of Part III of this study were to (a) identify the characteristics of Hispanic students referred, assessed and placed in SLH programs; (b) examine district policies and practices governing special education services for LEP students; (c) determine implications for improving policies and practices in the referral, assessment and placement of these students; and (d) suggest future research directions.

Research Questions

The central question posed in this study was: What are local district practices related to referral, assessment, and placement of limited English proficient Hispanic students in programs for the speech and/or language handicapped and how do these practices impact on the effectiveness of services for these students? A series of related questions guided data analyses:

Referral

1. What are the most frequent reasons for referring LEP Hispanic students for speech and/or language evaluations?

2. Who is the primary referral agent?

3. What are characteristics of students referred and eventually placed in SLH programs?

    a. What are the students' school histories prior to referral?

b. What are the sociocultural and other demographic characteristics of referred students?

c. At what age are students referred?

4. What is the language background of referred students?

a. What are the primary and secondary language(s) in the home? Do these match the student's LEP status?

b. What is the student's reported dominant language at school? Does it match the primary home language?

Assessment

1. How many and what types of tests are used to determine whether a LEP child is communication disordered?

2. What language proficiency information is contained in assessment reports used to determine student eligibility for speech and/or language therapy?

3. Which language(s) is used to assess communication abilities?

4. How do Hispanic LEP children perform on the most frequently adminstered tests of articulation and language skills?

5. What are the most common types of speech and language disorders among LEP students?

Placement

1. What are the primary or secondary handicapping conditions of LEP SLH Hispanic students at initial entry into special education programs?

2. What is the amount of time recommended for special education and for related services for LEP Hispanic students placed in SLH programs?

Policy and Procedure

1. What policies govern the assessment process?

a. What types of assessment data must be gathered to determine the presence of a speech or language handicap?

b. Who conducts the assessments?

2. What special provisions are made for assessing language minority students?

3. What policies govern special education placements?

a. Who must be involved on admission, review and dismissal (ARD) committees?

b. What adaptations of this process occur when the student being considered is limited English proficient?

4. What assurances are provided that a student's problems are not the result of differences of language, culture, socioeconomic status, or to not having had opportunities to learn?

This investigation was designed to provide a broad data base to describe the delivery of special education services to limited English proficient Hispanic students who are also identified as communication disordered. The study was exploratory and descriptive in nature and was intended to generate hypotheses, to direct subsequent research efforts, and to formulate policy recommendations for the improvement of services and programs provided students who qualify for both special education and special language programs.

Definitions

Speech Handicapped

The terms speech and/or language handicapped and communication disordered are used interchangeably in this report. Speech handicapped students as defined by the Texas Education Code (TEA, 1980) are:

> students whose speech is so impaired that they cannot be adequately educated in regular classes of the public schools without the provision of special services. (p. 4)

A student eligible for services is "one who has been determined by a certified speech and hearing therapist to have a communication disorder, such as stuttering, impaired articulation, a language impairment, or a voice impairment" (p. 27).

Limited English Proficiency

The 1974 Amendment (P.L. 93-380) to the Elementary and Secondary Education Act (1965) defines limited English proficient individuals or those with limited English speaking ability as those "who (a) were not born in the United States or whose native language is other than English; and (b) . . . who come from environments where a language other than English is dominant . . . and, by reason thereof, have difficulty speaking, reading, writing and understanding instruction in the English language" (p. 10).

Native Language

Native language, when used with reference to an individual of limited English proficiency, is defined as "the language normally used with such individuals or, in the case of a child, the language normally used by the parents of the child" (P.L. 93-380, p. 566).

II

REVIEW OF RELATED RESEARCH

Ortiz and Yates (1983, 1984) suggest that language minority children are frequently referred to special education on the basis of behaviors which do not fit the expectations of educators and are placed, not because they are handicapped, but because placement committees erroneously interpret linguistic, cultural, economic or other background characteristics as deviant. For example, the literature documents characteristics of second language learners and suggests that the processes involved in learning a second language are very similar to those involved in native language acquisition (Celce-Murcia, 1978; Dulay, Burt, & Krashen, 1982; Krashen, 1982; Oller, 1983). There is also evidence to suggest that many of the characteristics of children normally acquiring a second language are similar to behaviors considered symptomatic of speech and language disorders or of learning disabilities (Damico, Oller & Storey, 1983; Mattes & Omark, 1984; Ortiz & Maldonado-Colón, 1986). Behaviors such as poor comprehension, limited vocabulary, grammatical and syntactical errors may signify communication disorders for some students, but for others reflect a lack of English proficiency. It is possible, then, that special education referrals result from teachers' lack of understanding of how children acquire English as a second language. Teachers' perceptions that children are handicapped are confirmed when speech pathologists rely on assessment procedures which focus on students' mastery of the surface structures of language (e.g., tests of phonology, syntax, grammar, etc.), rather than on their ability to understand and communicate meaning (e.g. pragmatic criteria). High error rates on surface structures are then inaccurately interpreted as indicative of a speech or language disorder. While one could argue that language minority students profit from the individualized instruction provided by specially trained teachers and therapists, the placement of normal, as opposed to handicapped, students in special education decreases the effectiveness of appraisal and instructional personnel available to serve the handicapped.

Prevalence and Definition

Communication disorders are speech and language behaviors, or lack of behaviors, which are different from those expected given a child's chronological age (Bloom & Lahey, 1978). Prevalence figures suggest that 3.2% of the general population exhibit communication disorders (Kaskowitz, 1977), although some estimates are as high as 7-10% of the school-aged population (Ingram, 1976). Communication behaviors are considered disordered if they interfere with communication, call adverse attention to the speaker, or cause him/her to be self-conscious or maladjusted (Silverman, 1984). According to the American Speech, Hearing and Language Association (cited in Silverman, 1984), the most common of communication disorders are impairments of speech, language, voice, or stuttering. These disorders may be developmental or acquired and may result in a primary handicapping condition or be secondary to other disorders.

In Texas, speech and/or language handicaps (SLH) are the second most frequent classification of exceptional Hispanics, exceeded only by the

identification of these students as learning disabled. In 1983-84, of the Hispanics in special education, 20% were served in programs for the SLH, while 58% were in LD placements. These trends in placement are consistent with national statistics (U.S. GAO, 1981) which indicate that the most common classifications for language minorities are learning disabilities (36%), communication disorders (30%), and mental retardation (19%).

The percentage of Hispanics with speech and language handicaps is actually higher when students who receive speech therapy as a related service are included in prevalence figures. In a study of limited English proficient Hispanic students, for example, Ortiz et al. (1985) reported that 30% of learning disabled students also received speech or language therapy. García (1984) found that, of Anglo, Black, and Hispanic learning disabled students in her sample, only Hispanic students received speech therapy as a related service.

Articulation Disorders

Articulation errors, errors in the pronounciation of phonemes of the target language in isolation, in words, or in sentences, are the most common of speech disorders (McLean, 1974). To identify articulation problems, speech therapists administer an articulation test or obtain samples of conversational speech to confirm whether the child can produce sound(s) correctly spontaneously, or when given auditory, visual or other cues. Errors are then classified as omissions (deletions of sounds), substitutions (alternate sounds replace the correct ones), additions (insertion of extra sounds), or distortions (faulty production or lack of clarity in production of sounds). According to Templin (1957), substitution errors occur most frequently (74%), followed by distortions (16%) and omissions (10%). The variables most indicative of defective articulation are the number of omission errors, the total number of single consonants misarticulated, and the consistency of misarticulations (Peterson & Marquardt, 1981).

Language Disorders

The term <u>language disorder</u> denotes a deviation in the usual rate and sequence with which receptive and expressive language skills emerge. Ganz (1982) identified four major types of language disorders: (a) morphologic, the inappropriate or inadequate use and combination of morphemes; (b) semantic, the lack of understanding and expression of concepts and types of specific relationships; (c) syntactic, the inappropriate use of rules to combine single words into sentences; and (d) pragmatic, the lack of knowledge of the rules of language use for different purposes. In a similar vein, Bloom and Lahey (1978) distinguished among disorders of content, form, and use. <u>Form</u> is the means for connecting sound with meaning and consists of an inventory of linguistic units (phonology and morphology) and the system of rules for their combination (syntax). <u>Content</u> refers to ideas about objects and events in the world that are coded by language. <u>Use</u> is the acquired knowledge of rules and the perception of the communication context as well as the integration of knowledge of such factors as the occasion, topic, environment, and addressee into the communicative act. Normal language development is the successful interaction among form, content, and use, while disordered language development is characterized by disruption within a component or in the interaction among them.

Disorders of Fluency and Voice

Two other types of communication disorders are rhythm or fluency disorders and voice disorders. These are not discussed in depth in this report as they occurred infrequently among the subjects of this study.

Fluency disorders are characterized by an unusually high number of interruptions, hestitations, or prolongations in conversational speech (Ganz, 1982). Stuttering, a fluency disorder, affects approximately one percent of the school-aged population (England, 1970). Speech pathologists generally differentiate primary stuttering, the early, simple repetitions of sounds and syllables characteristic of young children, from secondary stuttering (Haring, 1974) which incorporates non-speech behaviors or mannerisms such as gasps, eye blinks, facial contortions, and general struggling for breath (McLean, 1974). The causes of stuttering are unknown although it is generally considered to be learned or acquired behavior resulting from attempts not to stutter (Haring, 1974).

Stuttering evaluations focus on describing the nature and severity of the problem as well as the conditions which increase or decrease stuttering behaviors. Observation data are gathered from situations such as conversations, question answering, reading, and monologues (Ganz, 1978). The number of syllables spoken per minute, the number of syllables in which some type of dysfluent behavior occurs, and the type of dysfluency involved are analyzed to determine the severity of the problem and the appropriate interventions.

While voice problems are not speech impairments, per se, they are classified as such because voicing is part of the speech transmission mode of language (Haring, 1974). Disorders of voice, or phonation, result from a disturbance in the functioning of the larynx, and particularly of the vocal folds (Silverman, 1984). The most common voice problems are harshness, breathiness, hoarseness, and nasality. These impairments may result from inappropriate intensity, pitch, and/or the quality of the vocal tone (McLean, 1974).

The identification of voice disorders involves a certain degree of subjectivity since the criteria for eligibility rests on judgments that the child's voice quality is "unusual". Generally, a voice is considered disordered (a) when a defective structure or organic disorder of the vocal organs produces patterns of speaking which are sufficiently atypical as to interfere with communication; (b) when voice production results in organic disorders of the vocal organs; or (c) when the habitual manner of voice production results in atypical patterns of pitch, loudness, or quality which are not appropriate to the sex or chronological age of the speaker (Berry & Eisenson, 1956).

Research Related to Speech and Language Acquisition Among Monolingual and Bilingual Populations

The determination of the presence or absence of a disorder is based on a comparison of the child's production with developmental norms or by comparing their production to that of peers from similar backgrounds and comparable

linguistic experiences. There is data available about the acquisition of English among native speakers. Similar data for language other than English and for individuals who acquire English as a second language, however, are very sparse, making the diagnosis of speech and language disorders among language minorities difficult.

English Phonological Development

There have been several studies of the age of acquisition of English speech sounds: Poole, 1934; Prather, et al., 1975; Sander, 1972; Templin, 1957; Wellman, et al., 1931 (cited in Peterson & Marquardt, 1981). In these studies, the percentages for the ages when a proportion of children correctly produced a given sound in all appropriate positions in words varied from 51% to 100% (Peterson & Marquardt, 1981). These variations are presented in Table 1.

Sander argued that the definition of mastery was overly stringent and used, instead, a criterion of "customary production", the age at which 51% of the children tested correctly articulated the sound in at least two or three positions (Peterson & Marquardt, 1981). Sander did not collect new data, but rather, reanalyzed that of Templin and Wellman (1957 and 1931, respectively). To standardize the treatment of consonants, he placed each sound at an age level where more than 50% correct production was achieved based on an average of the combined word positions. For example, according to Templin's data, the percentages of correct responses for the production of the /dʒ/ sound for 3 1/2 year old children was 58% in the initial, 43% in the medial, and 22% in the final position. The average of these is 41%. On the other hand, four year old children produced an average correct percentage of 69% in production of /dʒ/ in all three positions. Sander, therefore, placed the /dʒ/ sound at the four year level since it exceeded the 51% criterion.

Spanish Phonological Development

Ramirez (1977) conducted a study of the developmental order of acquisition of certain sounds among Spanish-speaking 3- to 5-year-old monolinguals in Puerto Rico. A criterion of 90% of the population per age group producing sounds correctly was used to determine developmental ages for sound mastery. Sounds were tested using picture stimuli in initial, medial and final positions, as appropriate. Age of mastery for sounds tested spanned from 3 months to 4 years-11 months as shown in Table 2.

Ferrero (cited in Maldonado-Colón, 1984) studied Spanish phonological development of 64 native Spanish speaking subjects between the ages of 2 years-10 months and 5 years-5 months who were randomly chosen from the public school population of Caracas, Venezuela. A Spanish articulation test was used to elicit sounds through picture identification. The sounds were tested in direct consonant-vowel syllables and in indirect syllables (vowel-consonant), in dipthongs, and /r/ blends. Ages at mastery, reported in prevocalic (sound preceding vowel), intervocalic (sound between vowels), and postvocalic (sound following vowel) positions are given in Table 2.

Another study of Spanish phonological development (Melgar de González, 1980) was conducted in Mexico City and involved 200 Spanish speaking preschoolers and kindergarteners. The subjects, arbitrarily selected from among

Table 1

Comparison of the Ages at Which Subjects Produced Specific Consonant Sound

Sound	Prather	Sander	Templin	Wellman	Poole
m	2	<2	3	3	3-6
n	2	<2	3	3	4-6
h	2	<2	3	3	3-6
p	2	<2	3	4	3-6
ng	2	2	3	*	4-6
f	2-4	2-6	3	3	5-6
j	2-4	2-6	3-6	4	4-6
k	2-4	2	4	4	4-6
d	2-4	2	4	5	4-6
w	2-8	<2	3	3	3-6
b	2-8	<2	4	3	3-6
t	2-8	2	6	5	4-6
g	3	2	4	4	4-6
s	3	3	4-6	5	7-6
r	3-4	3	4	5	7-6
l	3-4	3	6	4	6-6
sh	3-8	3-6	4-6	**	6-6
ch	3-8	3-6	4-6	5	**
th	4	5	7	**	6-6
zh	4	6	7	6	6-6
dzh	4+*	4	7	6	**
th	4+*	4-6	6	*	7-6
v	4+*	4	6	5	6-6
z	4+*	3-6	7	5	7-6
hw	4+*	*	*	*	7-6

*Sound tested but not produced correctly by 75% of subjects at the oldest age level.

**Sound not tested or not reported.

Note. Data are from Wellman and others (1931), Poole (1934), Templin (1957), Sander (1972), and Prather and others (1975). Poole used a 100% criterion level, Wellman and others and Templin used 75%. Poole, Wellman and others, and Templin used initial, medial, and final word positions in their tabulations. Sander used Wellman and others and Templin data, averaged the percent correct, and used a 51% criterion. Prather used the average of only initial and final word positions and a 75% criterion. Ages expressed are in years and months; <2 indicates less than two years. Table adapted from Prather and others (1975).

Source. Peterson, H. W., & Marquardt, T. P. (1981). Appraisal and diagnosis of speech and language disorders. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Table 2

Age of Acquisition in Years of Certain Spanish Sounds Among Native Spanish Speakers

Sound	Author		
	Ramirez (1977)	Ferrero (1979)	Melgar de González (1980)
m	3.0 - 3.11 (IM)	2.10 - 3.1 (IM)	3.0 - 3.5 (IM)
p	3.0 - 3.11 (IM)	2.10 - 3.1 (IM)	3.0 - 3.5 (IM)
b	3.0 - 3.11 (IM)	3.20 - 3.9 (IM)*	4.0 - 4.5 (IM)
n	3.0 - 3.11 (IMF)	2.10 - 4.1 (IMF)*	3.0 - 3.5 (IMF)
ʎ	3.0 - 3.11 (IMF)	2.10 - 4.1 (IM)*	3.0 - 3.5 (IM)
k	3.0 - 3.11 (IM)	2.20 - 3.1 (IM)*	3.0 - 3.5 (IM)
t	3.0 - 3.11 (IM)	2.10 - 3.1 (IM)*	3.0 - 3.5 (IM)
g	3.0 - 3.11 (IM)	3.10 - 5.5 (IM)*	4.0 - 4.5 (IM)
f	3.0 - 3.11 (IM)	3.20 - 4.9 (IM)*	3.0 - 3.5 (IM)
t	3.0 - 3.11 (IM)	3.50 - 5.1 (IM)*	3.0 - 3.5 (IM)
l	4.0 - 4.11 (IMF)	3.10 - 5.5 (IMF)*	3.0 - 3.5 (IMF)
r	4.0 - 4.11 (MF)	4.10 - 5.5 (MF)*	4.0 - 4.5 (MF)
n̂		2.10 - 4.9 (IM)*	3.0 - 3.5 (IM)
r̂		5.50+ (IM)	6.0 - 6.5 (IM)
h/x		3.10 - 5.5 (IMF)*	6.0+ (IMF)
d		4.10 - 5.5+ (IMF)*	6.0+ (IMF)
s		5.50+ (IMF)	6.0 - 6.5 (IMF)

Note. I = initial, M = medial, and F = final. Also, o = not tested, + = not meeting the mastery criterion by this age, and * = estimated range for mastery of sound.

children of state employees, ranged in age from 3 to 6 1/2 years. All the subjects were of Mexican ancestry, from urban settings, and represented 15% of the population of 12 nurseries selected to participate in the study. Using a protocol developed by the researcher, pictures were used to elicit 56 common nouns in order to test 16 single Spanish consonant sounds and 12 consonant blends. The criterion for acquisition was the age at which 90% of the subjects at that age level produced the sound correctly. The results of this study are summarized in Table 2. Most children by 6 years of age controlled the Spanish consonant sounds except for /x/, /d/, and /ɲ/ (as in "carne"). The author concluded that the articulation development of Spanish speaking children seemed to differ from articulation development of English speaking children. Mexican children acquired several sounds earlier than the English native speakers of the United States.

English/Spanish Phonological Development Among Bilinguals

Bernhard (1982) studied 50 Mexican Spanish speakers who were acquiring English as a second language. The group ranged in age from 3 years to 5 years-6 months. Table 3 presents the order of acquisition of certain English single consonant sounds for this population.

García and Trujillo (1979) studied the production of certain morphemes known as high error prediction morphemes, that is, morphemes identified in the literature as being common errors made by Spanish speakers learning English: /ch/→/dz/, /cj/→/sh/, /s/→/z/, and for English speakers learning Spanish: /r/→/rr/, /n/→/ñ/. Subjects were Spanish/English bilinguals and monolingual English speakers between the ages of 3 years-2 months and 7 years-8 months. Phoneme and sentence imitation were used to elicit sounds. Findings indicated errors were developmental rather than indicative of negative transfer; that is, errors were not caused by the interference of one language with the other. A clear identification of phoneme substitution as predicted by differences between Spanish and English did not occur.

Morphological and Syntactical Development Among Bilingual Populations

González (1968, 1978, 1983) studied syntax development of Mexican-American children in the Southwest who ranged in age from 2 years to 5 years. He concluded that the age at which a structure is produced may vary, but that the developmental stages of production do not. Table 4 depicts the order of verb tense acquisition according to González (1983). By 4.5 years of age, most of the verb tenses were functional. González (1975, 1978, 1983) also documented sentence production and the acquisition of transformations, the operations that allow the speaker to question, negate, and restate messages. Table 5 summarizes González' findings by age group.

Maez (1983) conducted a study among younger Spanish speakers (18-24 months of age) to determine the acquisition of noun and verb morphology. Data revealed that the first verb tense to appear was the present indicative followed by the preterite; the next tenses to appear were the progressive "-ando", and the imperative. These findings agree with those of González (1983).

Table 3

Developmental Sequence of English Consonant Singletons Among Spanish/English Bilinguals According to Bernhard (1982)

Age range (in years)	Sounds		
	Initial	Medial	Final
3.0 - 3.6	p b d k g m n s h w l	p b k m n f s	n
3.6 - 4.0	f t		ŋ
4.0 - 4.6		ŋ h	m f
4.6 - 5.0	dz	l	s ɹ
5.0 - 5.6		tʃ	p k
Not mastered by 5.6	v θ ð z ʃ tʃ j	d g v ð z tʃ dz w ɹ j	b t d g v θ ð z tʃ ʃ dz l

Table 4

Acquisition of Spanish Verb Tenses Among Native Speakers According to González (1983)

Age of acquisition (in years)	Verb tense
2.0 - 2.6	Present indicative Preterite
2.6 - 3.0	Present progressive Periphrastic future
3.0 - 3.5	Imperfect indicative Present subjunctive
3.5 - 4.5	Past Progressive Imperfect Past perfect Periphrastic past Future progressive
4.5	Present indicative Past subjunctive

Table 5

Acquisition of Spanish Syntax by Native Speakers According to González (1983)

Age (in years)	Syntactical elements
2.0 - 2.6	First sentences consist of two to three words, and an increasing number of syntactic patterns.
2.6 - 2.9	Frequent use of structures containing direct and indirect object pronouns.
	Beginning use of transformations: Positive to negative, questioning, and development of the advanced form of the imperative.
	Increased sentence complexity.
2.9 - 3.0	Constructions utilizing the following structures are common: Subject-verb-direct object-subject imperatives, compound sentences using "y" (and).
3.0 - 3.3	Begins to use locative adverb clauses, conditional clauses with "si" (if), and expresses comparison of quantities.
3.3 - 4.6	Initial use of tag questions, temporal uses of adverb clauses.
4.6 - 5.0	Can produce a total of 38 different syntactic structures.
	Uses "pero" (bus) and "y" to form compound sentences.
	Expresses comparison of equalities.
	Uses compound-complex sentences.
5.0	Uses relative and noun clauses frequently.
	Increases the use of a variety of temporal adverbial clauses.
	By this stage, morphological development is considered fairly well completed (González, 1983).

Padilla and Liebman (1975) examined the linguistic performance of three subjects, ages 1.5, 2.1 and 2.2 years old, who were acquiring English and Spanish simultaneously. The focus of the analysis was linguistic performance (production) rather than linguistic competence (knowledge of underlying structures). Speech data were taped in various environments (for example, home, school, with babysitter). Context and descriptive information was incorporated into tape transcriptions for purposes of analysis. To measure each child's rate of language acquisition, the mean length of utterance (MLU) was used. The MLU method assumes that increasing age reflects increasing complexity in linguistic expression. Linguistic data obtained by Padilla and Liebman were compared to Brown's (1973) data on monolingual early English language acquisition, and to González' (1970) data of early acquisition of Spanish among monolingual Spanish speakers. Findings document that correct word order was always demonstrated in utterances that were produced in English, Spanish, or a mixture of the two. When utterances included morphemic elements from both languages, no reduplication of morphological elements, redundancies, or violations of syntactical rules were observed. In all utterances, Spanish and English morphemes were correctly pronounced. In contrast to Swain (1972), Padilla and Liebman did not observe a slower rate of acquisition of question forms among bilingual children.

Padilla and Liebman reported that bilingual children acquiring two languages simultaneously demonstrated a preference in their language output for one language over the other. Swain, however, had noted that, initially, her subjects did not differentiate their languages into two linguistic systems. Since their subjects evidenced minimal language mixing, Padilla and Liebman concluded that such a stage must occur quite early in the language acquisition process.

Mace-Matluck (1981) described the characteristics of 120 Spanish-English bilingual children from kindergarten to grade 2 over a two-year period in various environments (the classroom, on the playground, at home). Three types of language assessments were used: an oral language proficiency test (The Language Assessment Scales), two forms of teacher ratings, and ethnographic verifications (audio-taped speech samples) of the children's language abilities.

Results of this part of the study indicated, among others, the following:

1. Language acquisition varied from individual to individual.

2. Children's language use and preference for language varied with the setting. While the preferred language of the playground was Spanish, classroom discourse generally took place in English. Classroom language was more restricted (shorter and less rich in vocabulary and syntactic structures) than was language used on the playground.

3. Home language usage reflected patterns similar to the playground; children used Spanish with adult family members, and more English with peers.

4. Code-switching, the alternate use of two languages within a communicative intent, was more prevalent among teachers than among students taped and observed.

Analysis of data obtained within the three contexts revealed that the children had a rich and varied vocabulary in their native language. Children possessing equal linguistic abilities in both languages evidenced similar English skills to those of monolingual speakers of English of the same age.

Mace-Matluck also examined bilingual child discourse with a focus on code-switching. Findings confirmed those of González and Maez (1980), Jacobson (1976), and Valdez-Fallis (1978). There was evidence of early language mixing among bilinguals exposed to dual language environments. Additionally, the data suggested the following:

1. Code-switching comprised a small part of the total language sample.

2. Within peer groups, code-switching increased with age. More intrasentential (within an utterance) code-switching was observed among young subjects, while more intersentential (between utterances) code-switching was evident among older subjects.

3. Code-switching was most frequently characterized by lexical substitutions.

4. Few instances were found in which Spanish words were inserted into English.

5. Children from border areas code-switched less than subjects from areas farther away from the border.

The author concluded that the amount of code-switching evident among groups is a function of style and variations in linguistic proficiency, not necessarily indicative of a disorder.

Speech/Language Disorders Among Bilingual Populations

There is limited research to help distinguish linguistic differences from communication disorders. Greenlee (1981) offers one of the few descriptive studies of linguistic characteristics of handicapped individuals. She described the code-switching behaviors of seven developmentally disabled persons, three children and four adults, and compared these with code-switching characteristics of normal adults and children. In general, ethnicity of interactors, syntactic structure, and conversation functions seemed to interact for mentally retarded persons in much the same way as for normal populations. Greenlee concluded that code-switching characteristics of mentally retarded persons cannot be attributed to lack of linguistic competence and that the extent to which developmentally disabled persons can become bilingual has been underestimated. She offered the following recommendations for assessment and special education programming: (a) Linguistic assessment should focus on sociolinguistic skills, not only on knowledge of formal linguistic structures; (b) assessments should be carried out by professionals who are themselves members of the child's language community; and (c) educational plans should consider patterns of language use in the child's community and the family's concern for language maintenance. The pattern of each individual's communicative skills must be the major consideration in decisions relating to language training.

While it is not possible to generalize from Greenlee's findings, given the small number of subjects and the wide variation in the characteristics of these students, she does provide data to generate hypotheses for further studies in this area. Until more data on simultaneous language acquisition is available, language planning will be hindered. This is particularly true given the lack of empirical studies related to Spanish language development for both monolingual and bilingual children in general, and exceptional children in particular.

In a study of two school districts, García and Acosta (1980) found variations in definitions and service incidences in the category of speech and language handicaps across districts. Seventy-seven percent of the students served were in grades K-3. Almost two thirds (60%) of the Hispanic population in both districts were identified as English dominant, 30% as bilingual, and 10% as dominant Spanish speakers. In District A, 44% of the Hispanics labeled communication disordered had articulation disorders, and 56% had language disorders. In District B, on the other hand, 14% of the Hispanics were labeled articulation disordered, while 57% were language disordered. The severity of the disorders ranged from moderate to severe. Most of the children received therapy in English; one child in two districts received services in Spanish only. Bilingual services were offered by only one therapist to half (50%) of the population s/he served.

Carpenter (1983) described current school practices and support services relative to communicatively disordered limited English speakers (LEP) and non-English speakers (NES). She found that less than 1% of district enrollments included in the sample were communicatively disordered LEP or non-English speaking children. Language, articulation, fluency and hearing impairments were the most common disorders. Carpenter also investigated the language proficiency of therapists and the language(s) used in therapy sessions. Of the clinicians who reported knowledge of a language other than English, few spoke the other language at fluency level. Language used for diagnosis varied depending on the child's home language, the therapist's fluency in that language, and availability of interpreters. Only 50% of the therapists who spoke Spanish used it in diagnosis. Further, therapy was conducted in English using the same practices used with native English speakers.

Diagnosing Communication Disorders In Language Minority Students

A child has a speech and language problem only if his/her language behaviors are atypical of peers from the same cultural group who speak the same dialect and who have had similar opportunities to hear and use language (Mattes & Omark, 1984). This excludes the child whose speech/language (a) contains dialectal variations; (b) exhibits deviations that are normal for certain stages of development; (c) is representative of his/her speech community; (d) is progressing at a slow rate, yet is still within the boundaries of a normal range; (e) appears to be disordered because s/he was assessed under poor testing conditions or by an evaluator who was not knowledgeable about his/her native language. Moreover, because speech and language disorders affect common language processes which underly different surface structures of the languages spoken by a child (Cummins, 1982, 1984), it is not possible to have a language disorder in one language and not in the other (Juarez, 1983).

This suggests that diagnostic criteria must include evidence that the disorder occurs in the native language, not only in English.

Wyszewianski-Langdon (1977) provides guidelines helpful to speech pathologists in discriminating language disorders from language characteristics influenced by exposure to two languages. The linguistic performance of a group of bilingual Puerto Rican children considered to have a language disorder was compared to a matched group of children judged to be progressing normally in their acquisition of both languages. Findings indicated that bilingual children demonstrate language disorders not only in the second language, but in their native language as well. The language disordered group (a) made more errors on tasks in each language except for auditory discrimination in English, (b) demonstrated less consistency of performance across tasks, (c) had lower native language skills, and (d) had difficulty benefiting from a language model as demonstrated on an articulation task. Langdon stressed the importance of assessing language dominance and proficiency and the need to capture language data in different environments, on different topics, and with different interactors in order to obtain a sample characteristic of the child's communicative competence. The key to accurate diagnosis is to use assessment procedures which allow comparison of skills in both languages.

Traditionally, identification of speech and language disorders has been based on the examinee's ability to use certain surface forms of speech, often the morphological and syntactic elements such as plurals, irregular verbs, and possessives (Oller, 1983). While analysis of these elements is critical to the diagnostic process, emphasis on surface structures creates a dilemma when the child being tested is limited English proficient. It is difficult to determine whether, for example, the child distorts or omits certain features of English syntax because of an articulation disorder or whether the error is developmental in nature and indicative of the fact that the student is in the process of normal second language acquisition (Damico, Oller, & Storey, 1983). This underscores again the need to compare skills across languages and to focus initially on communicative intent rather than on analysis of discrete skills.

Speech and Language Assessment Approaches

According to Damico (1985a), the tests most frequently used by speech and language pathologists to determine the presence or absence of a speech or language disorder are not sensitive to functional aspects of language because of an overemphasis on superficial aspects of language structure and a tendency to fragment those aspects into many separate components. This has resulted from the influence of structural linguistics and transformational grammar (Hubbell, 1981; Leonard, 1972; Muma, 1978). Tests, therefore, focus on directly observable, quantifiable elements of language. Damico (1985b) describes the major problems of discrete skill assessment instruments as follows.

Modularity

Traditional language assessment approaches are based on the notion that language is modular in nature; that is, that language is comprised of various components (phonology, morphology, syntax, grammar, and vocabulary) which can be separated, examined in isolation, or measured independently of other skills. A typical speech and language assessment battery might include, for

example, the Goldman Fristoe Test of Articulation (to test phonology), the Peabody Picture Vocabulary Test, and the Test of Oral Language Development (which has several subtests to measure areas such as oral vocabulary, word discrimination, grammatical closure, etc.). The examiner synthesizes scores on these instruments to describe language abilities and to derive a language quotient.

Syntax

Traditional assessment procedures emphasize syntax skills probably because this component interacts with semantics and morphology to express meanings. It is believed that syntactical structures are the best indicators of children's increasing linguistic proficiency as demonstrated by use of more complex language forms (Dulay, Hernandez-Chavez, & Burt 1978). However, this emphasis on syntax is misdirected because meanings cannot be circumscribed by a grammatical rule system that operates exclusively at the phrase or sentence level. Rather, the constraints of language use are influenced by such variables as speaker, intent, physical setting, verbal and social context, etc. This suggests that speech/language evaluations should focus on naturally-occurring communication, rather than on accuracy of syntactical or grammatical structures.

Quantification

The popularity of discrete point tests may be their ability to attach scores to language performance. Quantification is particularly important to placement committees charged with determining whether children meet eligibility criteria for special education services. Comparing children's performance against cut-off scores for eligibility simplifies the decisioning process. Scores, however, provide little substance for educational planning.

Norm Referencing

A key characteristic of traditional language assessment instruments is that they are norm-referenced. An individual child's performance can be compared to that of a particular chronological age or peer group. However, the majority of surface structures included on tests are learned at an early age, usually by age 6 or 7. When older children are tested, norms are based more on acquired knowledge or academic abilities than on oral language skills. Consequently, students are more likely to be classified as learning disabled and interventions developed without recognition of more basic language needs.

Standardization

Norm-referenced tests are characterized by standardized testing procedures. This allows comparison of an individual's performance with peers over time, in various testing situations, and with different examiners. To increase replicability of results, test publishers generally provide detailed descriptions of the procedures and the scripts for administering test items. The need for standardization reduces language to a somewhat artificial system. Consequently, there are discrepancies between skills measured by instruments and those observed in spontaneous conversation.

The most common criticism of language assessment instruments is that they do not accurately represent or describe the language characteristic of spontaneous communication. According to Leonard, Prutting, Perozzi, and Berkley (cited in Damico, 1985): "discrete skills emphasis introduces some (perhaps unavoidable) artificiality. The many dimensions of language operate in a synergistic relationship; their combined effects on a child's linguistic system is greater than the sum of their effects taken independently (p. 14)." Because language consists of some aspect of content or meaning that is coded or represented by linguistic form for some purpose or use in a particular environment (Bloom & Lahey, 1978), the initial focus in language description should be on how these three components interact rather than on the components themselves. Focusing on this interaction results in linguistic description rather than on quantification of correct or incorrect structures or responses and is consequently more descriptive of a child's performance in natural communication.

Alternatives to Traditional Assessment Approaches

There has been a recent shift in the field of speech and language pathology to a greater emphasis on evaluation of pragmatic skills in the identification of communication disorders. Pragmatics is defined as "the rules governing the use of language in context" (Bates, 1976, p. 420). According to Prutting (1982):

> There are few features of language that are not affected by pragmatic factors. A universal feature of language is that it is context sensitive. While it is possible conceptually to separate pragmatics, semantics, syntax, and phonology from one another, and we often do, they are interrelated nevertheless and operate synergistically. Therefore, the addition of pragmatics to understanding language provides a more complete and accurate understanding of the entire communicative system. (p. 125)

While it is not possible to provide a comprehensive review of research related to pragmatics, the work of Damico and his colleagues will be used to illustrate a promising alternative to traditional assessment procedures. Damico (1985) recommends the use of procedures that allow analysis of language data holistically and which sample communication interaction rather than responses to artificial tasks related only minimally to social interaction (e.g., items on discrete point tests). He developed a procedure, clinical discourse analysis, which incorporates clinical observation and analysis of data obtained from language samples to identify behavior patterns that interfere with interactive dyads.

To select criteria which could be used to analyze pragmatic language skills, Damico first organized problem behaviors into sets of behaviors which (a) were clearly defineable, (b) occurred in more than a single individual, (c) related to language function in a discernable way, and (d) demonstrated psychological reality. Behaviors were judged to have psychological reality if informed judges (linguists and speech pathologists) could reliably identify the same utterances as had been previously judged to be error behaviors or if other researchers had identified the behaviors as significant for study or had established a developmental basis for the behaviors. Seven of the most explicit

behaviors were used in two empirical studies comparing their effectiveness with more traditional procedures used by speech pathologists. These behaviors included: (a) linguistic nonfluencies, (b) revisions, (c) delayed responses, (d) nonspecific vocabulary, (e) inappropriate responses, (f) poor topic maintenance, and (g) need for repetition.

In the first study (Damico & Oller, 1980), results indicated that the pragmatic criteria were more effective in aiding teachers to accurately identify communication disordered children. Teachers using these criteria referred significantly more children for testing ($p < 0.03$) and the accuracy of their referrals was significantly greater. In the second study, Damico et al. (1983) used the same behaviors (pragmatic and discrete point) as predictors of language-based academic problems in Spanish-English bilingual children. The results again indicated that the pragmatic behaviors were more effective indices of language learning difficulties as measured by academic and social progress over an academic year.

The natural communication assessment approach is not without criticism. While alternatives to traditional approaches focus on data obtained in naturalistic settings, these can still contain artificial aspects. For example, if an interview is conducted to obtain natural language samples, this situation can still be contrived and unnatural. The interview is quite distinct from natural conversation. This is particularly true when the child is asked to tell stories about pictures, for example, or to respond to questions to a stimulus such as, "Tell me about _____ (e.g., what you did last night)." Another concern is that it is both difficult and time consuming to analyze spontaneous language samples because of the emphasis on description of skills as opposed to determining whether an answer is correct or incorrect. This concern seems to be aimed at the lack of norm-referencing. Bloom & Lahey (1978), however, suggest that the analyses should be criterion-referenced descriptions which focus on the skills that are important to a given task or real-life situation or communication-referenced criteria which describe general communicative behavior, rather than specific standards of performance. Criterion-referencing is also more useful in selecting instructional interventions.

Summary

Diagnosis of speech and language disorders among bilingual populations has been virtually ignored in the research literature until recently (Damico, Oller & Storey, 1983). Available data are based on studies in which subjects were selected on the basis of ethnicity, rather than on levels of language proficiency in the native language and in English. These studies shed little light on the interaction of language proficiency and handicapping conditions. Assessment personnel must be cognizant that, because of differences in the amount of exposure and experience with the language, it is normal for LEP students to demonstrate a lower level of English language proficiency (i.e., greater error rate) than their monolingual English speaking peers, particularly on standardized tests of English language development. This low performance alone is not sufficient to conclude that the child is disordered or to justify placements in special education.

III

METHODOLOGY

This was a descriptive, exploratory study of special education services provided for limited English proficient Hispanic students who were also classified as communication disordered. The study had two distinct aspects. The first was an investigation of the relationship between referral, assessment, and placement decisions and the linguistic, sociocultural, achievement, and cognitive characteristics of LEP students. Eligibility folders were examined to determine why students had been referred initially, how they were assessed, and to document the initial placement decision, including the identified primary and/or secondary handicapping condition(s). The methods described in this chapter refer to this phase of the study. The second phase of the study involved analyses of local school district policies to determine what procedural safeguards were afforded students who qualified for both special language programs (i.e., bilingual education or English as a second language) and for special education placement. These analyses are reported in Chapter V.

Sample Selection

The sample for this study was 124 speech and/or language handicapped students in grades 2-5 in three large urban school districts in central Texas. To obtain the sample, lists of Hispanic students enrolled in special education during the 1982-1983 academic year and of students classified as limited English proficient were obtained from each of the three districts. These lists were then cross-referenced to identify second, third, fourth, and fifth grade Hispanic students in SLH programs who were also classified as LEP. In two of the districts, all eligible students were included in the sample (n for District 1 = 7; n for District 2 = 25). In the third, students were randomly selected (n = 91) using a table of random numbers to draw the sample from relevant population lists (McClave & Dietrich, 1982).

The participating districts had large Hispanic student enrollments and long-established bilingual education and special education programs. The existence of these programs was critical given the research focus on students who were both handicapped and limited English proficient. Table 6 presents enrollment figures for the districts. The number of Hispanic students in District 1 was 15,433 (87% of the student population); Districts 2 and 3 had 45,384 (69%) and 15,471 (26%) Hispanic students, respectively.

Data Collection Procedures

Data collection procedures involved three steps: (a) design of data collection forms, (b) training of data coders, and (c) the data collection activity itself.

Table 6

Selected 1982-1983 Enrollment Figures for the State of Texas and for Districts 1, 2 and 3 by Type of Program

Type of program	Texas	District 1	District 2	District 3
Regular Education				
Total students enrolled	2,725,009	17,827	65,770	60,268
Hispanic students enrolled	853,304	15,433	45,384	15,471
Special Education				
Total students enrolled	360,948	2,418	7,425	7,329
Hispanic students enrolled	96,670	2,272	5,467	2,238
Speech/Language Handicap				
Total students enrolled	82,672	457	1,418	870
Hispanic students enrolled	19,698	432	1,148	307

Note. The above information was obtained from the Texas Education Agency (1) 1982-1983 Superintendents Annual Report, Part I; (2) the Annual Special Education Statistical Report, 1982-83; and (3) the 1982-83 Pupils and Membership Report, Fall Survey.

Data Collection Instruments

Two data collection forms were utilized. One was designed to capture referral and eligibility information from special education records; the other captured specific information about speech and language evaluations. Copies of the various special education forms used by the districts were obtained and information specific to the research questions was identified on these forms. Due to differences among the forms used by the respective local education agencies, three separate data collection instruments were designed to expedite data collection. However, all were designed to collect similar information related to student demography, referral, assessment, and placement.

Training of Coders

Coders became familiar with the district's special education forms and were provided two one-hour training sessions relative to data collection, professionalism and confidentiality. Coders then collected practice data from selected special education folders at the school sites. All trainees coded the same folder using the district data collection form. Their written responses were checked for accuracy and, where needed, further training and practice were provided. Percent of agreement ranged from .70 to .93 at the three sites. Training related to coding of results of the articulation test was also provided. Interrater agreement for coding of these data for 4 coders ranged from 95.4% to 99%, with a mean percent agreement of 97.3%.

Data Collection

Data collection took place from March to July, 1984. A representative of the district, usually the special education director, was designated by the superintendent or an assistant superintendent to be the official liaison to the Institute. The district liaison notified other district personnel, primarily principals and counselors, that approval had been granted HMRI staff to examine special education records of all students in the sample. In two of the districts, records were centralized in one location. In the third district, student records were kept on individual school campuses. The HMRI study coordinator sent a follow-up letter to principals in this district, again describing the purpose of the study and the nature of the school's involvement. More than fifty (50) schools were contacted during this early phase of the research activity.

Data Preparation and Analysis

Verified and corrected data were arranged into separate computer files for each school district as an initial step toward the construction of a "master" data file containing information for all the LEP SLH students. For each of the district files, a corresponding control file was written, using the Statistical Package for the Social Sciences (SPSS) (Nie et al., 1975). After the three district data files had been constructed and debugged, and after the respective SPSS files had been written, HMRI staff reviewed the variable lists from each district to identify those variables to include in a "master" data file containing information from all three districts. The three district files were merged to create the "master" LEP SLH file and analyses of data to answer the research questions were completed.

Descriptive statistical procedures, including freqencies, means, and crosstabulations were used to analyze the data. Information obtained from eligibility folders was examined to describe procedures involved in referral, assessment, and placement of LEP students and to describe the characteristics of students found to be eligible for speech/language therapy. Assessment results were analyzed to determine whether speech pathologists distinguished behaviors characteristic of speech and language disorders from those suggestive of linguistic differences (e.g., dialectal errors) or developmental errors made by students in the process of acquiring English as a second language. Details about individual data analyses are provided in the results section.

Methodology Limitations

Because of the paucity of data on limited English proficient students with communication disorders, this study was descriptive and exploratory in nature and was designed to generate, rather than to validate, hypotheses. Results have been used to develop recommendations for policy and practice to improve service delivery and a data-based research agenda specific to LEP SLH students which lays the groundwork for more carefully controlled experimental research.

The results reported in this document are based on field-oriented, and ex post facto research methodology. Therefore, the limitations of descriptive methodology are also the limitations of this investigation. Kerlinger [1964] and Mason and Bramble [1978] (cited in Garcia, 1984) describe these limitations:

1. The range and number of complex variables which are often studied in non-laboratory settings can result in substantial problems dealing with the identification of cause-and-effect relationships among the variables.

2. Because appropriate sampling may be problematic, there are difficulties, hazards, and limitations associated with the generalization of the results. Moreover, in a study utilizing an ex post facto methodology, the research subjects have already been assigned to the program being investigated.

3. Descriptive research also has the additional limitation that the reported findings may be biased in the collection and interpretation of the data. Because this type of research methodology relies on a type of open-ended nature of inquiry, there is sometimes a tendency to overlook certain types of evidence that could cause one to arrive at different interpretations or conclusions.

Finally, in research that deals with the collection of information from student folders, the results can be only as reliable and as valid as the information documented in these school district eligibility records. As Kerlinger (cited in Garcia, 1984) warns, "the records of many schools and school districts are not well kept. And in most cases no thought has been given to the research use of the records. Scores will be missing or inaccurately recorded. . . . Meanwhile, investigators must be constantly alert to possibilities of inaccuracies and the fact that school records are often not in adequate form for statistical treatment" (p. 109). Missing data may be regarded as indicating the absence of some pertinent special education action. However, drawing such a conclusion may be erroneous, as it may have occurred but simply has not been recorded.

IV

RESULTS AND DISCUSSION

The following sections report the results of an examination of (a) behaviors of limited English proficient students which result in a referral to special education because of suspected speech and/or language disorders, (b) demographic characteristics of referred students, (c) assessment instruments and procedures used to determine the presence of a communication disorder, (d) subjects' performance on tests administered to determine eligibility, and (e) placement committee recommendations regarding the type of handicapping conditions and the amount of time required for speech therapy.

Referral

The following questions guided analysis and interpretation of information related to reasons for referral and demographic characteristics of LEP students who are tested and placed in programs for the speech and language handicapped.

1. What are the most frequent reasons for referring Hispanic students for speech and language evaluations?

2. Who is the primary referral agent?

3. What are characteristics of students referred and eventually placed in SLH programs?

   a. What are the students' school histories prior to referral?

   b. What are the sociocultural and other demographic characteristics of referred students?

   c. At what age are students referred?

4. What is the language background of referred students?

   a. What are the primary and secondary languages in the home? Do these match the student's LEP status?

   b. What is the student's reported dominant language at school? Does it match the primary home language?

Time of Referral

Students in the sample had been referred for special education between 1978 and 1983 (see Table 7), with the majority (62.6%) referred during the 1981-82 academic year. In contrast to LEP LD students (Ortiz et al., 1985), whose referrals appeared to be more evenly distributed between the beginning of the fall and spring semesters, SH students appear to be referred primarily in the fall semester. As can be seen in Table 8, of 107 students, 72 (67.3%) were

Table 7

Year of Referral of Limited English Proficient Speech/Language Handicapped Students

Year of referral	Students referred	
	#	(%)
1978	4	(3.7)
1979	8	(7.5)
1980	19	(17.8)
1981	38	(35.5)
1982	29	(27.1)
1983	9	(8.4)
TOTAL	107	(100.0)

Table 8

Month of Referral of Limited English Proficient Speech/Language Handicapped Students

Month of referral	Students referred	
	#	(%)
January	9	(8.4)
February	10	(9.3)
March	3	(2.8)
April	6	(5.6)
May	2	(1.9)
August	1	(0.9)
September	27	(25.2)
October	23	(21.5)
November	22	(20.6)
December	4	(3.7)
TOTAL	107	(100.0)

referred in September, October and November, with the other referrals distributed over the remainder of the academic year. The number of referrals rose to some extent at the beginning of the spring semester, but this increase was fairly small.

The difference in patterns of referral between LD and SLH students cannot be explained by available data. Because students' problems are manifested in oral communication, abnormal speech and language behaviors may be more readily identifiable than are achievement problems. On the other hand, referrals for achievement difficulties may be delayed until the teacher accumulates evidence that the student is not profiting from instruction in the regular classroom. Referrals of potentially learning disabled students during the spring semester of the first year may reflect the teacher's perception that there is adequate evidence of poor progress by this time. There may also be a tendency to refer SLH students early for diagnoses and treatment to prevent these problems from becoming more serious and interfering with academic achievement or socialization. It would be interesting to compare characteristics of students who experience early referral with those who are referred later in the year for differences in type and/or severity of disorder.

While students in the sample were LEP, it was also not possible to determine from available data whether they were in bilingual education or regular classroom programs. LEP students in the process of acquiring English as a second language are likely to make many developmental and/or dialectal errors. It is possible that monolingual teachers referred LEP students for speech and language screening or evaluation because they did not understand that such errors are characteristic of a normal developmental process for LEP students. Referrals by bilingual educators are more likely to be appropriate since these teachers speak the child's native language. However, as will be seen in later sections, limited assessment of native language skills make it impossible to confirm this hypothesis.

Finally, unlike other appraisal personnel, who depend on referrals from teachers or other sources, speech and language therapists frequently conduct campus-wide screenings to identify children who may have communication disorders. These screenings are normally conducted in the fall and thus may explain differences in time of referrals for some districts. This did not appear to be the case for the districts participating in this study as only one student was reported to have failed a speech screening.

Source and Reasons for Referral

Data on the source of referrals was available for 63 students. The majority of these students (87%) were referred by classroom teachers. Referrals were seldom initiated by parents, medical or social/welfare agency personnel, or other sources.

Teachers gave 23 reasons for referring students (see Table 9), the majority of which were related to communication behaviors: (a) speech (30%), (b) poor language development (18%), (c) articulation (18%), (d) unintelligible speech (14%), and (e) articulation and language (7%). When all reasons related to speech and language were collapsed into categories of related behaviors, the most common concerns of teachers appeared to be articulation (62%), language (18%), articulation and language (7%), and stuttering (6%). Approximately 16% of

Table 9

Reasons for Referral for Limited English Proficient Students Placed in Speech and Language Programs

Reasons for referral	Students referred[a] #	(%)
1. Speech	32	(30)
2. Poor language development	19	(18)
3. Articulation	19	(18)
4. Unintelligible speech	15	(14)
5. Articulation/language	7	(7)
6. Stuttering	6	(6)
7. Poor progress in reading	6	(6)
8. Poor academic progress	6	(6)
9. Problems in both languages	3	(3)
10. Immaturity	3	(3)
11. Motivation problems	3	(3)
12. Request of parent	3	(3)
13. Poor progress in spelling	2	(2)
14. Poor memory/retention problems	2	(2)
15. Referred to pinpoint problems	2	(2)
16. Poor progress in math	1	(1)
17. Poor progress in other academic area	1	(1)
18. Highly distractible/poor attention	1	(1)
19. Voice	1	(1)
20. Failed speech/language screening	1	(1)
21. Poor auditory comprehension	1	(1)
22. Problems in motor skills	1	(1)

[a]Number and percents do not match n of students, as more than one reason was cited for some students.

the students were referred for achievement difficulties, with poor progress in reading (6%) and poor academic progress (6%) cited as the most frequent concerns. These two reasons, in contrast, were the most frequent reasons for referral of LEP Hispanics served in programs for the learning disabled (Ortiz et al., 1985).

It appears that different behaviors trigger referral of students to speech/language programs than to programs for the learning disabled, although referrals in both instances may be language-related. Referrals to SLH programs result from behaviors which interfere with oral communication while children suspected of being learning disabled appear to communicate effectively but lack the literacy-related aspects of language (Cummins, 1982; Ortiz et al., 1985). This, in part, may be explained by age differences at the time of referrals. A comparison of age peers would indicate whether older SLH students exhibit language behaviors similar to LD students or whether these two types of handicapping conditions can be distinguished on the basis of interpersonal communication skills.

Age at Referral

Children will master speech sounds by 5 to 7 years of age if they have normal intelligence and hearing and if they have had adequate exposure to a linguistic environment (Peterson & Marquardt, 1981). Those who demonstrate articulation problems at this age are likely candidates for speech and language programs because of the importance given in special education to early intervention. Early intervention programs are seen as a means of minimizing the severity of the handicapping condition, teaching students coping skills as early as possible to minimize the negative consequences of the disability, or for preventing problems from developing in high risk students.

Sixty percent of the students (n = 106) were referred between the ages of 5 and 7. Subjects between the ages of 5 and 6 constituted 31% of the referrals; those between the ages of 6 and 7 comprised 29% of the sample. That there were fewer referrals among older students is consistent with research data which suggest that mature articulation is achieved at 7 to 8 years of age and that the number of articulation errors decreases with age (Smith & Miller, 1966). Similar explanations can be posited for receptive and expressive language skills.

Sociocultural Characteristics of Students

As a group, the students in the sample appear to be from low income families. While specific data related to parents' income were not available, this information was extrapolated from parents' occupation recorded in students' folders. Such data were available for 76 mothers and 55 fathers in 2 of the 3 districts (see Table 10). In general, the proportion of parents who were either as unemployed (86% mothers; 15% fathers), unskilled or semiskilled (18% fathers; 5% mothers) was much higher than parents holding skilled jobs (20% fathers; 1% mothers). Two of the three school districts have high percentages of low income families, as is evidenced by the number of Chapter 1 programs offered in the schools. Garcia (1984) found that 57-70% of the entire population in District 2 were below the poverty level in the period between 1979 and 1982. Given this scant information it is not appropriate to generalize about the entire sample. The lack of data about socioeconomic status,

Table 10

Level of Occupation of Parents of Limited English Proficient Speech/Language Handicapped Students

	Parent					
	Father		Mother		Total	
Level of occupation	#	(%)	#	(%)	#	(%)
Unemployed	8	(15.0)	65	(86.0)	73	(55.7)
Unskilled worker	5	(9.0)	1	(1.0)	6	(4.5)
Semi-skilled worker	5	(9.0)	3	(4.0)	8	(6.1)
Skilled worker	11	(20.0)	1	(1.0)	12	(9.2)
Too vague to tell	26	(47.0)	6	(8.0)	32	(24.4)
TOTAL	55	(100.0)	76	(100.0)	131	(100.0)

Note. Data are for 2 districts only.

however, raises questions about the procedures used by districts to gauge the influence of this variable on student performance and specifically on language development.

Other variables related to the student's family background included family size and the child's birth order. Data from 2 districts (n = 82) revealed that the number of siblings ranged from 0 to 9 and that 42% of the sample had one or no siblings, while 30% had three or more. Information on birth order was available for 16 students only. Of these, approximately 62% were either first-born or the third child, whereas 13% were the second child and the others were younger (18%). The proportion of families reporting fewer children contrasts demographic reports (Brown et al., 1980) which suggest that Hispanic families, on the average, tend to have larger families. However, comparisons are difficult without information about the age of parents. It is possible that some of these families were young and growing. Follow-up studies of these subjects would confirm this hypothesis.

Retention History

Of 65 cases in 2 districts for whom information were available, 20% of referred students had been retained. Retention rates were lower than for learning disabled Hispanic students (Ortiz et al., 1985), 45% of whom had been retained at least once prior to referral for special education. However, LD students were older when referred, with referrals occurring most frequently at the first and second grade levels. Of interest is whether SLH students, referred at younger ages, were subsequently retained after initial placement in speech therapy programs.

That the greatest number of referrals were related to speech and articulation supports the hypothesis that, because of the age of the subjects, teachers were more concerned with basic interpersonal communication skills than with the literacy-related aspects of language. Teachers may have referred students because of the negative social consequences of speech and language behaviors. The lack of specificity in speech and language evaluation reports about potential consequences, however, suggests that districts did not comply with the requirement that problem behaviors have an adverse effect on educational performance and that a significant educational need be demonstrated to justify special education placements.

Language Background at Home and at School

Of 102 students for whom data were available, Spanish was the primary home language for 73 percent. English was reported as the primary language for 20%, while 7% reported both languages as primary. This was not a surprising finding in that the sample was selected precisely because they were classified as limited English proficient. Data for school language dominance was available for only 16 of the subjects (15%), with no data available for one of the districts.

Data about mainstream placements were available for only 42 subjects. Of these, 31% had participated in bilingual education; available data did not indicate whether the remainder received English as a second language (ESL) instruction or whether they were in regular classrooms. Program placement information available in eligibility records maintained by bilingual education,

ESL, or other special language programs should be routinely available to committees deliberating special education eligibility. That a system for centralizing information is not already in place suggests that language status may not be considered a critical variable in special education decisions.

The Comprehensive Individual Assessment

The purpose of the comprehensive individual assessment is to identify an educational need in terms of (a) the presence or absence of a physical, mental, or emotional disability; (b) the presence or absence of a significant educational need; and (c) the identification of specific learning competencies of the student along with instructional and related services that can improve and maintain the student's competencies (Texas Education Agency, 1979). The report of the individual assessment summarizes the findings of all the assessment data, both formal and informal, and addresses the degree to which assessment results might be influenced by the student's educational background, language, cultural environment, socioeconomic status or previous educational opportunities. In the case of students being considered for speech therapy services, the report must also specify the type and severity of the communication disorder and the functional implications of the handicapping condition for the educational process.

Data related to speech and language evaluations were analyzed to answer the following questions:

1. How many and what types of tests were used to determine whether a LEP child is communication disordered?

2. What language proficiency information is contained in assessment reports used to determine student eligibility?

3. Which language(s) is used to assess communication abilities?

4. How do Hispanic LEP children perform on the most frequently administered tests of articulation and language skills?

5. What are the most common types of speech and language disorders among LEP students?

Tests Administered

For the comprehensive speech assessment, speech therapists select a battery of instruments to measure the child's communication abilities. Because the assessment battery yields the data used to determine whether a child is handicapped, the number and types of tests administered to LEP students in this sample were examined.

The number of tests administered was determined by a frequency count of the tests included in the initial assessment of each of 85 students for whom data were available. The average number of tests administered was 4.75. Means for each of 7 categories of tests administered were calculated. Tests were divided into categories using available information from test publishers or other sources (e.g., Buros, 1978) regarding their purposes (see Table 11).

Table 11

Frequency and Types of Tests Included in Reports of the Comprehensive Individual Assessment of Limited English Proficient Speech/Language Handicapped Students

Type of test	Frequency (n = 85)
Language Development	
Peabody Picture Vocabulary Test - English	53
Language Sample	33
Test of Auditory Comprehension of Language - Spanish	31
Test of Auditory Comprehension of Language - English	42
Test of Language Development	29
Peabody Picture Vocabulary Test - Spanish	11
Del Rio	7
Preschool Language Scale	4
Monterrey Language Program	3
Token Test for Children	3
Utah Test of Language Development	3
Northwestern Syntax Screening	2
Dallas Preschool Screening	2
Illinois Test of Psycholinguistic Abilities	2
Structured Photographic Expressive Language Test	2
Other tests [n = 1 each]	9
TOTAL	236
Articulation	
Goldman-Fristoe Test of Articulation	53
Austin Spanish Articulation Test	12
Arizona Articulation Proficiency Scale	4
Photo Articulation Test	4
Fisher-Logeman	3
Modified Developmental Articulation Test	1
Test of Language Development - Articulation Subtest	1
TOTAL	78
Other Areas of Speech	
Diagnostic Speech Analysis	32
Fluency Checklist	3
Oral-Periperal Examination	2
Stuttering Severity Instrument	1
Monterrey Fluency Profile	1
Stuttering Analysis	1
Stuttering Frequency/Duration	1
Speech/Hearing	1
TOTAL	42

Note. Number of administrations for each type of test does not match n of students, as many received more than one test in each category.

Table 11 (continued)

Frequency and Types of Tests Included in Reports of the Comprehensive Individual Assessment of Limited English Proficient Speech/Language Handicapped Students

Type of test	Frequency (n = 85)
Language Dominance	
Language Assessment Scales	18
Bilingual Syntax Measure	2
Language Assessment Battery	1
Pictorial Test of Bilingualism	1
Woodcock-Johnson Language Proficiency Battery	1
TOTAL	22
Tests of Intelligence	
Detroit Test of Learning Aptitude	3
Slosson Intelligence Test	3
Boehm Test of Basic Concepts	3
Bicultural Test of Nonverbal Reasoning	1
Wechsler Intelligence Scale for Children-Revised	1
Oral Commision Subtest	1
TOTAL	12
Achievement	
Systems Go	3
Wide Range Achievement Test	2
Peabody Individual Achievement Test	2
Durrell Listening Comprehension	2
TOTAL	10
Other Area Tests (4)	
Informal Observation	4
TOTAL	4

Tests of articulation and language development were the most frequently given. Language dominance tests were administered to a much lesser extent, although the sample was designated limited English proficient.

The high frequency of administration of articulation tests corresponds to the most common reason for referral of students, i.e., articulation problems. The Goldman-Fristoe Test of Articulation (GFTA; Goldman & Fristoe, 1969) was administered to 53 of 58 students (62%) who were given an articulation test. The high frequency of administration of language development tests suggests that therapists used a standard assessment battery, regardless of the reason for referral. Tests of language development included the Peabody Picture Vocabulary Test (PPVT; Dunn, 1965) in English (53, or 62%) and Spanish (11, or 13%), the Test for Auditory Comprehension of Language (TACL; Carrow, 1973) in English (42, or 49%) and Spanish (31, or 36%), and the Test of Language Development (TOLD; Newcomer & Hammill, 1977) (29, or 34%). Thirty-eight percent of the sample (n = 85) were also administered a Diagnostic Speech Analysis, an informal assessment instrument; a language sample was obtained for 33 (39%) students.

Language of Testing

The assessment of an individual's language must consist of formal and/or informal assessment of language dominance and proficiency in both the receptive and expressive domains (Texas Education Agency, 1979; 1984). This assessment must take place before any other individual assessment is administered. If a student's dominant language is other than English, then instruments must be administered in the dominant language.

In many instances, language dominance testing was not conducted as part of the special education assessment. Rather, scores were obtained from the students' school history records. These data may not accurately describe children's current language functioning.

Of the 20 students (15%) for whom language of testing was reported in the speech and language evaluation, 17 were tested bilingually, 2 were tested in English, and one was tested in Spanish. There were indications, however, that a greater degree of testing in Spanish occurred. For example, 31 students were given a Spanish version of the Peabody Picture Vocabulary Test. In most cases, though, no mention was made as to whether the speech and language evaluation was conducted in English, in Spanish, or bilingually. It is assumed that tests such as the Goldman-Fristoe Articulation Test (GFTA) and the Test of Oral Language Development (TOLD) were administered in English since there are no Spanish versions of these tests. Even to make this assumption, however, is speculative, given the common practice of informally translating tests into the child's native language. A few students (n = 12; 14%) were administered the Austin Spanish Articulation Test (Carrow, 1974).

There was limited explanation of the nature of bilingual administrations, the calculation of scores, the norms used, or the interpretation of the results. In the absence of data about the nature of the assessment process, it is not possible to judge the adequacy and validity of bilingual administrations. The use of the Spanish version of the PPVT, and of the Spanish version of the TACL which has English-only norms, raises questions about district practices in modifying test instruments or procedures for LEP students. The use of

standard norms to interpret results of non-standard administrations is neither valid nor does it provide an accurate reflection of a child's communicative competence.

Performance on Articulation Tests

A total of 58 students were given an articulation test. The most frequently administered was the Goldman-Fristoe Test of Articulation (n = 53). Five students were tested using either the Photo Articulation Test (Pendergast, Dickey, Selmar, & Soder, 1969) or the Arizona Articulation Proficiency Scale (Fudala, 1970).

Goldman-Fristoe Test of Articulation. The Goldman-Fristoe Test of Articulation (GFTA) tests children's production of 23 phonemes and 12 blends in initial, medial and final positions within words. The test contains three subtests: sounds in words, sounds in sentences and stimulability. The GFTA can be used with children 2 years of age and older. The number of errors made by the examinee are compared against expected numbers of errors made by normal children, by age. Administration time is between 10 and 20 minutes.

Photo Articulation Test. The Photo Articulation Test uses photographs of objects to test 24 single phonemes in initial, medial, and final positions (where applicable), three blends, and 18 vowels and diphthongs (Peterson & Marquardt, 1981). The photographs are the stimuli for 69 of the test items; 7 sounds are elicited by questions or by imitation. The sounds are grouped by place of articulation for the purpose of analyzing the influence of phonetic placement on misarticulations.

Arizona Articulation Proficiency Scales. The Arizona Articulation Proficiency Scales is a picture articulation test but includes sentences to test older children and adults (Peterson & Marquardt, 1981). The test samples 24 single-phoneme consonants, 3 blends, 16 vowels and diphthongs, and 4 vowel plus /r/ combinations (e.g., car, ear). A relative value is assigned to initial and final word-position consonants; vowels and diphthongs are tested in the same stimulus words. Total values for each word depends on the assigned value which is determined by the frequency of occurrence of the phoneme, the consistency of correct or incorrect production, and the word position tested. The child's score is interpreted as a percentage of intelligibility.

Error patterns. Articulation errors were tabulated for each consonant sound tested (n = 23) by type of error (substitution, omission, distortion) and by position (initial, medial, final). Vowel sounds were not analyzed because they were tested only by the Arizona. Tables 12 and 13 show the results of this analysis. That sounds usually mastered at a later age were misarticulated was not surprising given that 60% of the subjects were referred between 5 and 7 years of age. Thus, sounds such as /p/ and /m/ for which the developmental age at mastery is 3 years were rarely misarticulated, while the error rate for /soft th/, /s/, /z/, /sh/ and /ch/, /v/, and /voiced th/, which have a developmental norm of 7 to 8 years, was high. Substitution errors constituted the most frequent type of articulation error of consonant sounds (mean = 8.2), followed by omissions (mean = 2.1), and then distortions (mean = 1.3). Subjects had an average of 2.4 errors on consonant blends tested (see Table 13).

Table 12

Articulation Errors of Limited English Proficient Speech/Language Handicapped Students by Sound and Type of Error[a]

(n = 58)

Sound tested	Age at mastery (in years)[b]	Type of error			Total
		Substitutions	Omissions	Distortions	
		#	#	#	#
th (voiceless)	7 years	91	26	3	120
s	8 years	46	15	25	86
ch	7 years	46	4	4	54
sh	7 years	47	-	6	53
v	8 years	39	12	-	51
th (voiced)	8 years	31	3	1	35
dz	7 years	26	2	2	30
r	6 years	15	2	4	21
l	6 years	5	12	6	20
g	4 years	12	6	2	20
d	4 years	14	5	-	19
t	6 years	7	5	1	13
y	4 years	13	-	-	13
f	4 years	11	-	-	11
b	4 years	6	4	-	10
k	4 years	5	5	-	10
ng	6 years	6	3	-	9
n	3 years	1	4	-	7
m	3 years	2	3	-	6
h	3 years	1	-	-	2

[a]Derived from the Goldman-Fristoe Test of Articulation, the Photo Articulation Test and the Arizona Articulation Proficiency Scales.

[b]Source. Sander, E. K. (1972). When are speech sounds learned? Journal of Speech and Hearing Disorders, 37, 55-63.

Table 13

Mean Frequency of Articulation Errors of Limited English Proficient Speech/Language Handicapped Students by Type of Misarticulation

Type of misarticulation	Frequency of errors
Substitutions	
M	8.2
Minimum	2.0
Maximum	22.0
SD	4.9
Omissions	
M	2.1
Minimum	0.0
Maximum	9.0
SD	2.4
Distortions	
M	1.3
Minimum	0.0
Maximum	12.0
SD	2.7
Blends	
M	2.4
Minimum	0.0
Maximum	9.0
SD	2.5

The seven most frequently misarticulated sounds were categorized as either developmental, if the child's age was at or below the developmental norm for mastery (Sander, 1972), or as indicative of a possible disorder, if the child's age was greater than the developmental norm. Table 14 indicates that, as a group (n = 39, for whom both age and assessment results were available), there was a higher percentage of students for whom errors were likely developmental rather than indicative of an articulation disorder.

It is possible that district therapists adhere to a philosophy of early intervention; that is, they may provide services if it is their professional judgment that a child will have difficulty mastering sounds within the developmental period. However, provisions of services must also take into consideration children's LEP status. For LEP students, errors are even more likely to be developmental in that, because students are in the process of acquiring English proficiency, phomenic discriminations stabilize at a later age.

To confirm the diagnosis of articulation disorder, the presence of these same errors in the native language and/or evidence that, in addition to the most frequently misarticulated sounds presented here, students also have a high error rate among sounds mastered at earlier stages must be shown. These data were not evident in the articulation results reported in eligibility records for this sample.

Since all students in the sample were LEP and the majority of them were from homes where Spanish was the primary language, the results of articulation testing were compared with phonological characteristics of Spanish speakers who acquire English as a second language. Saville and Troike (1975) and others (Bernhard, 1982; Garcia & Trujillo, 1979; Matluck, 1980) have compared the phonemic systems of English and Spanish and identified sounds likely to be problematic for Spanish speakers learning English as a second language. Saville and Troike predicted that Spanish speakers learning English as a second language would have difficulty discriminating and producing correctly the following English sounds: /ch/-/sh/; /s/-/z/; /n/-/ng/; /b/-/v/; /t/-/soft th/-/s/; /d/-/hard th/; and /y/-/j/. As can be seen in Table 15 sounds identified as problematic by Saville-Troike were among the sounds most frequently misarticulated by LEP students.

Errors were further analyzed to investigate the specific sounds substituted when errors occurred. Table 15 confirms Saville and Troike's prediction about occurrence of dialectal errors among individuals learning English as a second language. Patterns revealed several occurrences of /s/-/z/, /sh/-/ch/, and /b/-/v/ substitutions, with these sounds also the most frequently misarticulated. Errors which occurred with lower frequency and which were not dialectal in nature are, perhaps, more descriptive of true speech disorders.

In summary, these articulation data suggest that errors made by LEP subjects could very well be dialectal or developmental. However, it was not possible to confirm this hypothesis because results of assessment of articulation skills in the student's native language, the data most critical to distinguishing language differences from disorders, was missing. According to Anderson (cited in Mattes & Omark, 1984):

Table 14

Analysis of Selected Substitution Errors of Limited English Proficient Speech/Language Handicapped Students by age at Evaluation and Expected Age of Mastery[1]

(n = 39)

Sound tested	Position	Students making errors n (%)	Types of errors: Developmental n (%)	Types of errors: Disorder n (%)
/th/	Initial	25 (64.1)	16 (64.0)	09 (36.0)
	Medial	16 (41.0)	11 (68.8)	05 (31.3)
	Final	21 (53.8)	13 (61.9)	08 (38.1)
		62	40 (64.5)	22 (35.5)
/s/	Initial	10 (25.6)	07 (70.0)	03 (30.0)
	Medial	13 (33.3)	07 (53.8)	06 (46.2)
	Final	06 (15.4)	03 (50.0)	03 (50.0)
		29	17 (58.6)	12 (41.4)
/z/	Initial	18 (46.2)	09 (50.0)	09 (50.0)
	Medial	09 (23.1)	06 (66.7)	03 (33.3)
	Final	07 (17.9)	04 (57.1)	03 (42.9)
		34	19 (55.9)	15 (44.1)
/ch/	Initial	07 (63.6)	04 (36.4)	04 (36.4)
	Medial	08 (20.5)	05 (62.5)	03 (37.5)
	Final	10 (25.6)	04 (40.0)	06 (60.0)
		29	16 (55.2)	13 (44.8)

[1]Source. Sander, E. K. (1972). When are speech sounds learned? Journal of Speech and Hearing Disorders, 37, 55-63.
Note. Percents for error frequencies based on total n (39); percents for types of errors based on row totals.

Table 14 (continued)

Analysis of Selected Substitution Errors of Limited English Proficient Speech/Language Handicapped Students by age at Evaluation and Expected Age of Mastery[1]

(n = 39)

Sound tested	Position	Students making errors n (%)	Types of errors: Developmental n (%)	Types of errors: Disorder n (%)
/sh/	Initial	13 (33.3)	11 (84.6)	02 (15.4)
	Medial	09 (23.1)	07 (77.8)	02 (22.2)
	Final	08 (20.5)	07 (87.5)	01 (12.5)
		30	25 (83.3)	05 (16.7)
/v/	Initial	08 (20.5)	05 (62.5)	03 (37.5)
	Medial	12 (30.8)	11 (91.7)	01 (8.3)
	Final	05 (12.8)	05 (100.0)	--
		25	21 (84.0)	04 (16.0)
/th voiced/	Initial	05 (12.8)	04 (80.0)	01 (20.0)
	Medial	15 (38.5)	11 (73.3)	04 (26.7)
	Final	--	--	--
		21	15 (71.4)	06 (28.6)
/d /	Initial	08 (20.5)	07 (84.6)	01 (15.4)
	Medial	06 (15.4)	04 (66.7)	02 (33.3)
	Final	07 (17.9)	04 (57.1)	03 (42.9)
		21	15 (71.4)	06 (28.6)

Table 15

Types of Articulation Errors Made by Limited English Proficient Speech/Language Handicapped Students

(n = 58)

	Type of articulation errors	
Sound tested[a]	Substitutions[b]	Distortions[c]
/th/	/f/, /t/, /s/, /d/	
/s/	/th/, /t/, /z/, /sh/	/lateral s/, /frontal s/
/z/	/s/, /th/, /d/	/lateral z/, /frontal z/
/ch/	/sh/, /t/	
/sh/	/ch/	
/v/	/b/, /w/, /f/	
/voiced th/	/d/, /l/	
/dz/	/d/, /y/, /sh/, /ch/, /z/	
/r/	/l/, /w/, /dr/, /d/, /b/	
/l/	/n/, /y/, /f/	tongue thrust
/g/	/t/, /d/, /n/, /k/, /tj/, /y/	
/d/	/t/, /ch/, /l/, /n/	
/t/	/ch/, /p/, /s/, /k/, /p/, /l/	
/y/	/dz/, /l/, /w/, /t/	
/f/	/p/, /s/, /t/	
/b/	/m/, /v/, /p/, /r/, /f/	
/k/	/t/	

[a] Listed in descending order of frequency.

[b] Sounds substituted are not necessarily in order of frequency.

[c] Very few distortions were described; most listed as distorted only.

> Assessment for the purpose of identifying speech disorders should always be done in the first or dominant language of the child. At present, there are no reliable means to determine whether a child's articulation errors in the second language reflect the child's interlanguage phonology or whether they are evidence of a speech disorder. Consequently, testing for articulation disorders in the second language could result in labeling a normal child as handicapped. In addition, a program of speech therapy might interfere with the child's normal interlanguage development. (p. 6)

Performance on Language Development Tests

A test of language development was the most frequently administered test included in the speech and language evaluations. Instruments used assessed receptive or expressive language and included measures of morphology, syntax/grammar and/or vocabulary.

Test of Language Development. The Test of Language Development (TOLD) tests both expressive and receptive language functions using five principal and two supplemental subtests (Newcomer & Hammill, 1977). Subtests measure selected aspects of semantics, syntax and morphology. Semantic subtests include Oral Vocabulary, in which examinees define words, and Picture Vocabulary, in which examinees point to pictures to indicate stimulus words given by the examiner. Syntax is measured by the Grammatic Understanding, Sentence Imitation and Grammatic Completion subtests. The Understanding subtest requires examinees to select the picture described by a sentence read by the examiner; the Imitation subtest requires sentence repetition; and the Completion subtest requires the examinee to supply missing words in their correct form. Phonology is measured by a Word Articulation subtest, which requires word production, and a Word Discrimination subtest which requires the identification of sets of minimal pairs as identical or different. The TOLD takes about 40 minutes to administer, and can be used with children 4 to 8-11 years of age. It was normed on a sample of 1,014 children from 15 states.

Of 29 students who were administered the TOLD, data were available for 5 to 22, depending upon the subtest. It appears that therapists administered selected subtests based on the reason for referral. The Language Quotient mean was 70.93 and ranged from 61 to 88 for 15 students. Scaled scores were generally available for each subtest, and mean scaled scores ($\underline{n}$ = 22 each) ranged from a low of 4.05 on Grammatic Completion (ranging from 2-7) to a high of 6.14 on the Grammatic Understanding subtest (ranging from 2-12). While scaled scores are generally low, the pattern appears to reflect higher levels of comprehension than knowledge of surface structures such as syntax and grammar. Such a pattern would be expected of second language acquirers, but a conclusion as to whether errors were developmental errors or indicative of a communication disorder cannot be reached in the absence of language data in Spanish.

Peabody Picture Vocabulary Test. The Peabody Picture Vocabulary Test (PPVT; Dunn, 1965) is a measure of receptive vocabulary for persons aged 2 1/2 years through adult. The test consists of a series of 140 stimulus pictures representing nouns for the most part, although a few other parts of speech are used. The examinee points to the picture which corresponds to the

word given by the examiner. Administration time is about 15 minutes. The test was normed on 4,102 subjects between 2 and 18 years of age, who are described as being from all ranges of intellect.

The PPVT was the most frequently administered test of language development. Scores were reported for 53 students on the English administration of the PPVT. The mean score for this group was 4 years-3 months, with a range from 1 year-11 months to 9 years-2 months (see Table 16). Additionally, IQ scores (mean = 68.7) and percentile ranks (all below the 15th percentile) were reported for 9 subjects. Without a larger number of students in the sample, it is difficult to interpret these findings. Scores were reported for 10 of 11 students who were administered the Spanish version of the PPVT. Their scores ranged from 2 years-9 months to 8 years-3 months, with a mean of 4 years-6 months. No IQ scores were reported for the PPVT-Spanish administrations indicating, perhaps, that assessment personnel recognized that reporting scores obtained through adaptations of standardized assessment instruments is inappropriate.

Test for Auditory Comprehension of Language. The Test for Auditory Comprehension of Language (TACL) measures receptive language using 101 picture plates to test auditory comprehension of single nouns, verbs and adjectives and comprehension of questions and sentences. Testing procedures are similar to those for the PPVT. The test takes about 20 minutes to administer and is suitable for children of ages 3 through 6. The TACL has both English and Spanish versions; however, the manual contains norms for the English test only. Norms are based on a sample of 200 middle-class Black, Anglo and Mexican-American children. Separate norms for each ethnic group are not available.

Available scores on the English administration of the TACL (n = 40) reveal a mean age equivalent of 5 years-2 months, with scores ranging from 3 years-2 months to 6 years-7 months. Percentile scores (n = 15) ranged from 6 to 96, with about one-half of the sample scoring below the 11th percentile. Results for the Spanish TACL were reported although the application of English norms to the results of a Spanish administration is inappropriate and invalid. Moreover, judgments about the student's Spanish proficiency cannot, and should not, be made on the basis of one limited measure of Spanish comprehension. Reported scores from the Spanish administration (n = 27) were lower than English test scores, with the mean at 4 years-4 months, and ranges from 3 years-0 months to 6 years-10 months (see Table 16). Percentile scores for the Spanish TACL (n = 4) ranged from 11 to 54.

As a group, students appear to have scored higher on the TACL-English administration than on the PPVT, as evidenced by the mean score on each test (5 years-2 months verus 4 years-3 months respectively). Scores were compared for those students who had been administered both tests. Figure 1 shows the range of scores for the TACL and the PPVT for 32 students. As can be seen, approximately 44% of the age scores on the PPVT fell between 3 to 4 years of age, whereas 31% of TACL age scores fell between 6 and 7 years. This difference in scores may reflect the difference in the tests themselves. While the PPVT is solely a measure of single-word receptive vocabulary, the TACL includes items which test morphology and syntax. Consequently, the testing format and stimuli of the TACL provide more contextual clues that may serve to help the student respond. For example, the student is asked to point to

Table 16

Age Equivalent Scores of Limited English Proficient Speech/Language Handicapped Students on PPVT and TACL by Language of Administration (English/Spanish)

Language of administration	n	Age equivalent scores		
		Mean	Median	Range
English				
PPVT	53	4-3	3-11	1-11 to 9-2
TACL	40	5-2	5-6	3-0 to 6-7
Spanish				
PPVT[a]	10	4-6	3-10	2-9 to 8-3
TACL[b]	27	4-4	4-0	3-0 to 6-10

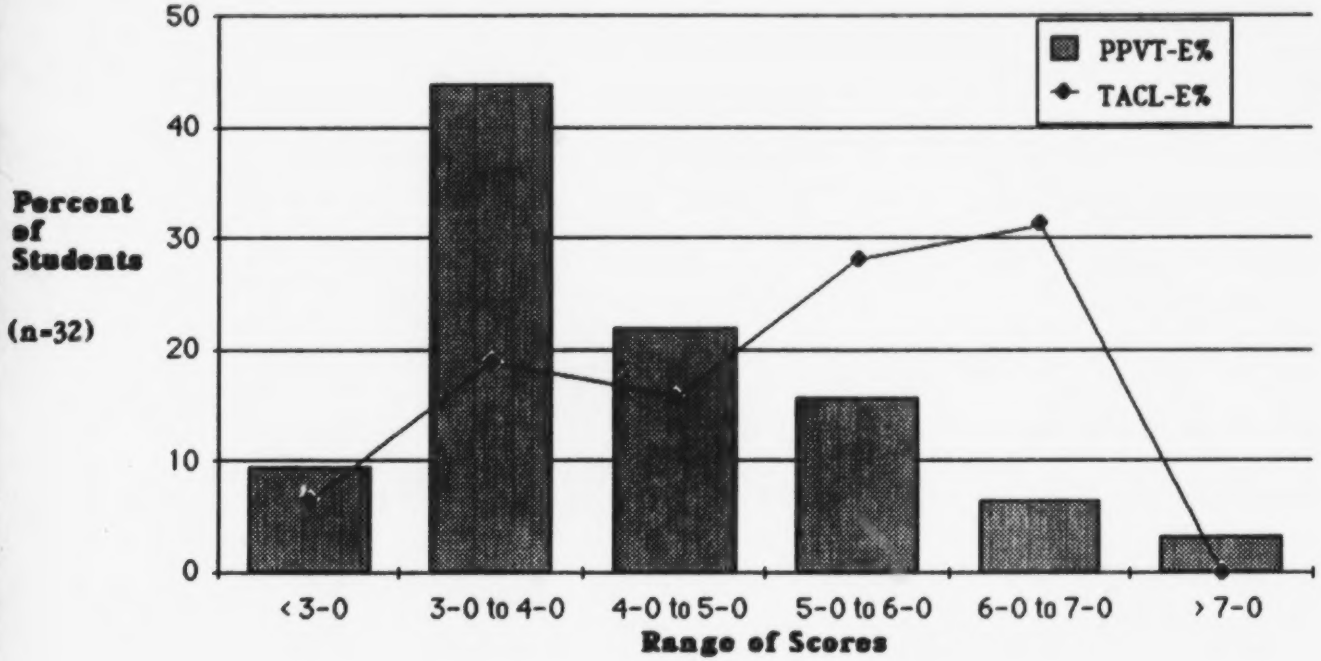
Note. Scores rounded to nearest month.

[a] Students with PPVT Spanish scores also received an English administration.

[b] Scores on the English and Spanish administrations of the TACL are not necessarily pairs of scores for the same student, as some were tested in one language only.

Figure 1

Comparison of Age Equivalent Scores of Limited English Proficient SLH Students on the TACL and PPVT English Administrations



pictures which correspond to stimuli such as, "The girl is jumping", "The boy is chased by the dog", and so on. Students in the two sub-groups (English-Spanish TACL) were not the same, in that both groups included some students who were tested in one language only. Without scores in both languages, it is impossible to make judgments about relative language proficiency. Only 11 students had both sets of scores. In these cases, differences in scores across the two languages tended to be small.

Comparison of Spanish and English scores indicates that students tend to be low in both languages, with mean Spanish age scores lower than English scores. In practice, such comparisons lead assessment personnel to conclude that low performance in the native language is evidence that the child is truly handicapped. However, it is inappropriate to interpret the difference for the following reasons:

1. The TACL has a Spanish version, but no norms, so raw scores must be translated to age equivalents based on English norms. Without Spanish norms and/or information about changes in item difficulty resulting from the translation (if any), it is difficult to interpret these data.

2. The norming population for the TACL were middle class children, in contrast to the sample in this study which included a large number of students from low socioeconomic status backgrounds. Thus, their low performance could be as much a reflection of SES as of a speech/language disorder or their LEP status.

3. Of 21 students for whom chronological ages available, 12 were more than 6 years old. While the test is not age-appropriate for this group, its use probably reflects the unavailability of appropriate tests for the target population. Nonetheless, it is not ethical to report results obtained from nonstandard administrations as accurate reflections of the child's performance. Users of these data must be advised to interpret these data cautiously. The data do highlight the need to develop instruments and procedures to aid diagnoses and services for LEP students.

Diagnostic Speech Analysis

Results of the Diagnostic Speech Analysis were available for 30 students in one district. In general, students were judged to have adequate speech across all areas tested (pitch, loudness, fluency, voice quality, and rate). Eleven students were described as having voices which were "too soft"; however, there was no information about the possible causes of this problem. The only other problem noted was that 4 students were rated as having fluency problems characterized by hesitations in speech production.

Language Samples

Although the literature suggests that language samples are the best means of judging communicative competence (Erickson & Omark, 1981; Mattes & Omark, 1984), district therapists obtained samples for only 39% of the subjects. Analyses of these focused on the structural correctness of students' expressive language rather than on the students' ability to communicate effectively in a given context. In few instances were language samples obtained in Spanish. It was, therefore, not possible to compare students' communicative competence in

English to that in their native language. Moreover, data obtained from the language samples were not systematically incorporated into reports of assessment results. Consequently, language samples offered no further elucidation as to whether the child's language performance was normal or disordered.

Because second language learners make numerous surface structure errors as they are in the process of acquiring English skills, it is difficult to distinguish normal from abnormal acquisition through analyses of these errors. Damico, Oller and Storey (1983) suggested that language evaluation should focus on how well a child used language in communication interactions, rather than on the structural accuracy of the language used. They developed a screening instrument using clinical discourse analyses to identify behaviors which interfere with communication. This procedure is described on pages 19-20 of this report.

As with the articulation data, the research design included a reanalysis of the language samples collected as part of the speech and language assessment using an adaptation of the pragmatic criteria recommended by Damico, Oller and Storey (1983). Raters were to judge children's ability to communicate messages rather than the structural correctness of their utterances. Procedures called for samples to be examined by two bilingual speech pathologists for evidence of (a) revisions, (b) nonspecific vocabulary, (c) inappropriate responses, (d) poor topic maintenance, and (e) need for repetition. Therapists were to rate the samples independently and then compare ratings. Differences in ratings were to be resolved through discussion and concensus reached about the characteristics of the sample. If consensus could not be reached, a third rater would evaluate the sample.

It was determined, however, that a re-analysis of the available samples was inappropriate because the samples tended to be brief and did not meet criteria for length of samples recommended in the language assessment literature. According to Mattes and Omark (1984), a minimum of 30 minutes of conversation should be recorded for analysis. Other researchers maintain that a minimum of 100-200 utterances must be obtained (Damico, Oller, & Storey, 1983; Prutting, 1983; Tyack & Gottsleben, 1974), while still others recommend 200 or more (Muma, 1978). The obtained samples were also limited in terms of the context or topic of the communication. In most instances one sample was obtained, although the literature recommends a minimum of two communication settings (Prutting, 1983).

Damico et al.'s screening procedure, however, seems to hold promise for making more accurate distinctions between language differences and language disorders. Replication studies validating these pragmatic criteria are recommended.

Recommendations for Speech/Language Services

Of 78 students for whom these data were available, therapists recommended therapy for articulation and language for 36 (46.2%). Seventeen (21.8%) were identified as needing language therapy only, while articulation therapy was recommended for 16 (20.5%) students. Table 17 presents services recommended for each student. When compared to the original reason for referral of the students in the sample, the data show that while students may

Table 17

Type of Speech and Language Therapy Recommended for Limited English Proficient Speech/Language Handicapped Students

Therapy recommended	LEP speech/language handicapped students (n = 78)	
	#	(%)
Articulation and language	36	(46.2)
Language only	17	(21.8)
Articulation only	16	(20.5)
Language and rhythm/stuttering	3	(3.8)
Rhythm/stuttering	3	(3.8)
Language and voice	1	(1.3)
Language, articulation & rhythm/stuttering	1	(1.3)
TOTAL	78	(100.2)

have been referred for articulation, services were recommended for language or for both articulation and language most frequently. One reason for this may be that it was common practice to administer an English language development test as part of the comprehensive individual assessment and that, because language minority students perform poorly on these tests, they were identified as also having a language disorder as well.

The use of a language test, rather than the administration of a second articulation test, may result from federal and state regulations requiring a multifaceted assessment and prohibiting committees from making eligibility decisions on the basis of results of one test. As indicated previously, however, higher error rates on tests which measure mastery of discrete elements of the English language are to be expected when a child is in the process of acquiring English as a second language. When LEP students are tested using this approach, it is likely that articulation errors will be accompanied by low levels of language functioning. These low scores are used to justify recommendations for additional special education intervention although they are just as likely to be indicative that the child is in the process of normal second language acquisition.

In summary, students were assessed primarily in the areas of phonology and language development. Fewer students were tested in other areas such as intelligence and achievement. The data suggest that while reports of language of testing underestimate the level of bilingual or native language testing which actually occurs, the need for native language assessments is not adequately addressed. Moreover, the interpretation of scores and the conditions of administration are also not described in sufficient detail. The lack of such information inhibits any conclusions about the accuracy of test information and the eligibility of the student for speech and language services.

Placement

Data were analyzed to answer the following questions:

1. What are the primary or secondary handicapping conditions of LEP SLH Hispanic students at initial entry into special education programs?

2. What is the amount of time recommended for special education and related services for LEP Hispanic students placed in SLH programs?

Primary Handicapping Condition

Information on the primary handicapping condition designated at the placement meeting was available for 116 students (see Table 18). The majority (109) were identified as speech or language handicapped, while the rest were classified as LD or MR. Speech and/or language handicapped was the secondary classification for 50% of the LD and MR students. One hour of speech/language therapy was recommended for 68% of the SLH students; 14% were to receive 1 1/2 hours and 10% were to receive 2 hours or more of intervention weekly (see Table 19). That the majority of students were to receive 1 hour of therapy suggests that students were mildly disordered.

Table 18

Primary and Secondary Handicap of Limited English Proficient Speech/Language Handicapped Students at Initial Placement

Type of handicap	Level of handicap			
	Primary (n = 116)		Secondary (n = 108)	
	#	(%)	#	(%)
SH	109	(94.0)	3	(2.8)
LD	6	(5.2)	1	(0.9)
MR	1	(0.9)	0	
Other	0		2	(1.9)
None	0		102	(94.4)
TOTAL	116	(100.0)	108	(100.0)

Table 19

Time Recommended in Speech Therapy for Limited English Proficient Speech/Language Handicapped Students

	LEP speech/language handicapped students	
Hours per week	#	(%)
1 hr	43	(68.3)
1 1/2 hrs	9	(14.3)
2 hrs	5	(7.9)
2 1/2 hrs	1	(1.6)
3 hrs	1	(1.6)
5 hrs	3	(4.8)
10 hrs	1	(1.6)
	63	(100.0)

The small number of LEP students in one district sample suggests an extremely low placement rate for that district, and highlights the variability among districts in service incidence patterns. The district in question was similar in demographic characteristics to one of the other participating districts, in terms of ethnic representation in the community, availability of bilingual education, etc., yet identified much fewer students as requiring speech services. More research is needed to investigate reasons for the low placement rate for LEP students in special education. In a related study of LEP students in LD programs (Ortiz et al., 1985), similar variance across districts was found in the proportion of LEP students classified as learning disabled. There may be differences in the referral, assessment and/or placement of LEP students in special education that are neither evident in district policy nor reflected in the procedural requirements and documentation in students' eligibility folders.

Placement Committee

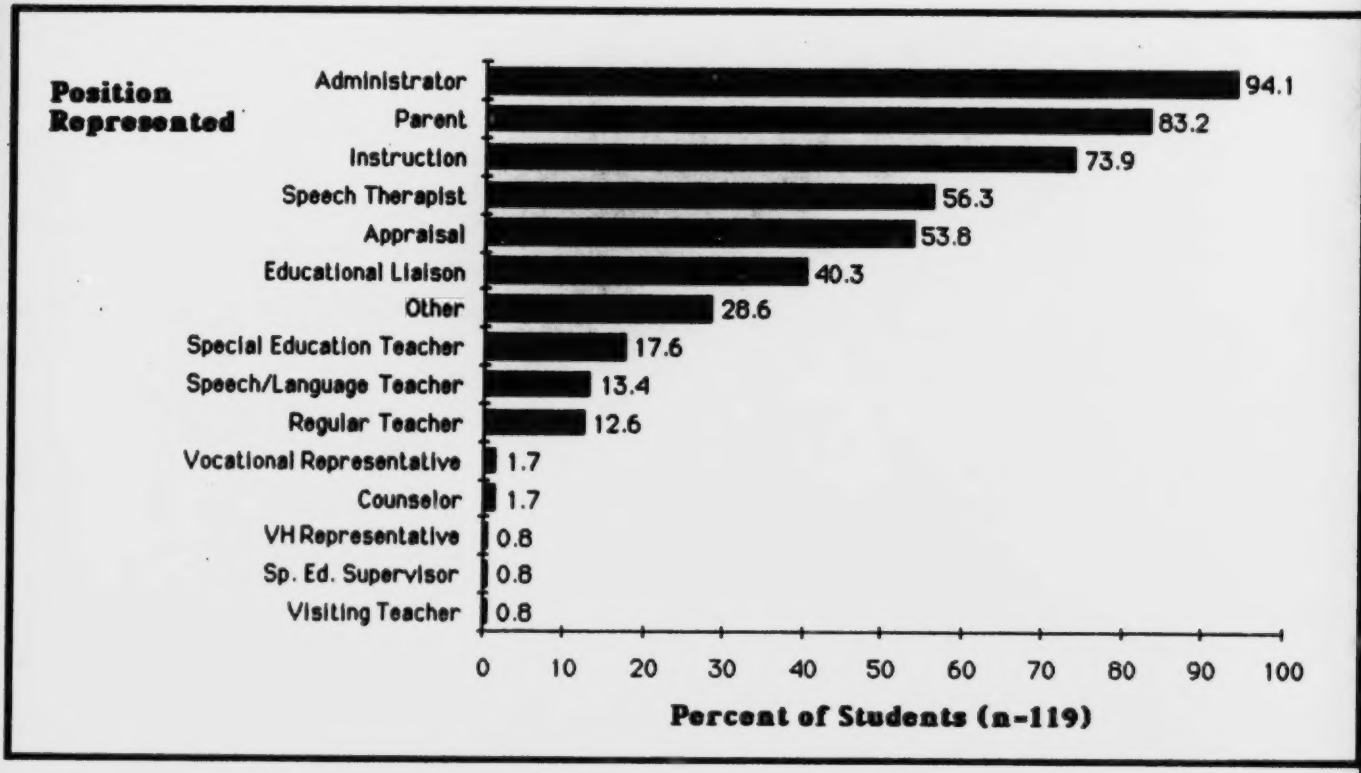
The placement decision is to be made by a team of individuals who are knowledgeable about the student, competent in interpretation of evaluation results, aware of placement options, and who have the authority to allocate personnel and resources to meet the unique needs of students. State policy requires that the placement committee include, at a minimum, a representative of (a) administration, (b) appraisal, (c) instruction, (d) parent(s), and (e) the child, if appropriate.

The average number of participants on placement committees for the LEP students in this sample was five. Figure 2 indicates committee members, by position, for 119 students. The most frequent representatives were those required by law: (a) an administrator or designate (94.1%), (b) parents (83.2%), (c) instructional representatives (73.9%), (d) speech therapists (56.3%), (e) appraisal representatives (53.8%), and (f) the educational liaison (40.3%). Speech therapists were classified as appraisal representatives in some districts suggesting that they were present at most, if not all, of the placement meetings. Because of the limited testing of other areas such as intelligence or achievement, it is not likely that the appraisal representative would be an educational diagnostician or psychologist, except for those students whose primary handicap was other than SLH.

A surprising finding was the high level of involvement of parents on placement committees. A frequent complaint of teachers is that minority parents do not participate in school related activities and that they are unlikely to be involved in decisions affecting their children's education. This high rate of participation may have occurred because this was their child's initial placement into special education and parents may have participated to support the school's attempts to improve their child's communication abilities. It is also possible, however, that parent signatures simply signified acceptance of the school's decision, rather than attendance at the ARD meeting. Committee reports provided little insight into the nature of parental participation in this process. Documentation of their participation, and of changes in level of participation over time (e.g. at annual review meetings), should be conducted to determine whether parents are informed, effective participants and whether they continue this high level of involvement over time.

Figure 2

Membership on ARD Committees of LEP SLH Students by Positions Represented



There was little evidence that personnel from special programs (e.g. bilingual education, ESL, migrant education, etc.) were involved in placement meetings, but this was probably because district forms did not specify the positions or program assignments of committee members. Consequently, there was no way to determine, for example, whether the representative of instruction was the regular education, special education, or bilingual education teacher. It is difficult to ascertain the extent to which the participants were knowledgeable about the child, particularly in terms of linguistic, cultural, experiental, or other factors which influence speech and language acquisition. Districts are cautioned to document program assignments for personnel and to consider the expertise required for the committee to make informed decisons about the child's future. In the instance of students being considered for placement in speech, hearing, and language programs, participation of individuals fluent in the child's language is critical to distinguishing differences from disorders.

Level of Agreement Among Committee Members

Despite the complexity of the cases of LEP students being considered for special education placement, there was almost unanimous agreement about placement and programs among committee members. Of the 119 SLH cases for whom information on this variable was available, there was complete agreement among members in 97% of cases. This finding is almost identical to the level of agreement of commitee members who considered LEP students for placment in LD programs (Ortiz et al., 1985). The percent of agreement for these committees was 97.6%. These findings suggest that signatures indicate simply that the participant agrees with the group decision reached, rather than indicating individual opinion about the cases.

Assurances

Districts are required to provide assurances that the identification of a handicap and placement in special education is not primarily due to one or more of the following: (a) command of the English language, (b) differences in cultural lifestyle, (c) lack of educational opportunity and limited opportunity to learn. Forms for 2 of the 3 participating districts contained statements requiring that committee members confirm that students' problems were not related to these variables. In the third district, forms contained a blanket statement to this effect with no action required of the ARD committee.

In the 2 former districts, data were available for a total of 78 students. For all but 13 students in one district, assurances were provided in all 4 areas. In the case of the 13 students, forms were left blank, with no explanation. Such an omission may reflect lack of documentation, rather than failure to deliberate issues which influence student performance. In all cases, however, the inadequacy of information related to language, sociocultural data, and previous instructional strategies, raises questions regarding the degree of attention to these assurances. In the case of LEP students, adequate evidence must be offered that the child's speech and language characteristics reflect the presence of a handicapping condition rather than lack of English proficiency.

Summary

The process of identifying a communication disorder in limited English proficient students is a complex task which involves consideration of a broad range of variables, including, for example, students' language, culture, socio-economic status, and other background characteristics. Information about these variables serves as a backdrop for determining which students should be referred, selecting evaluation procedures, interpreting assessment results, and for distinguishing individual differences from handicapping conditions. Data in eligibility folders were insufficient to determine whether these LEP subjects were in the process of normal second language acquisition, or whether their speech and language behaviors were symptomatic of a speech or language disorder. This suggests a lack of understanding of how to identify communication disorders among language minority students.

The gravest concern which emerged from the data is that the procedures used by speech and language pathologists in the identification and diagnosis of communication disorders virtually ignored students' LEP status. Speech pathologists are experts in the language acquisition process and should be be able to judge the communicative competence of students. It is imperative that they, more than any other professional, understand the importance of assessing native language skills as a prerequisite to interpreting English language performance.

This is not as much a criticism of speech pathologists as it is a reflection of the state of practice in bilingual special education. It is unrealistic to expect district personnel to develop and implement appropriate referral, assessment, and placement procedures in the face of a limited knowledge base about the interaction of language proficiency and handicapping conditions and limited instruments and procedures to facilitate the assessment process. On the other hand, while there is a lack of research specific to limited English proficient students who are handicapped, there is a wealth of literature in the fields of linguistics and second language acquisition, for example, which can help describe behaviors expected of second language learners. The findings reported in this chapter suggest that this literature is not familiar to district personnel, in general, or to speech pathologists, in particular. This raises several ethical and professional issues including, among others, whether specialized personnel are meeting their obligation to know their clients and to obtain data that accurately reflects their skills and abilities.

V

ANALYSIS OF DISTRICT POLICY

Policies related to referral, assessment, and placement were analyzed to aid in interpretation of findings. District practices were extrapolated from data found in student eligibility folders and are, essentially, the results reported in Chapter IV. State policies and guidelines regulating the provision of special education services during the period of the subject's referral and identification were obtained from the State Department's Policies and Administrative Procedures for the Education of Handicapped Students (Texas Education Agency, 1980). Local district procedure manuals were the sources of policy information for each district. One of the foci of the policy analyses was to describe how the needs and unique characteristics of limited English proficient students were addressed by participating districts, particularly for those students being considered for placement in speech and/or language therapy.

Policies Related to Referrals

The following questions guided analyses of district policies governing referrals of LEP students to special education:

1. What are the steps involved in the special education referral process?

2. Who must be involved at each step?

3. What types of data are gathered for consideration by referral committees?

4. How do referral policies address the needs and characteristics of linguistically culturally different students?

Prereferral

There are no state or federal policies specific to prereferral intervention strategies. However, two of the three districts specified that alternative teaching strategies or curricula, regular education support services, and/or remediation efforts be attempted prior to referring a student to special education. The extent to which prereferral activities were included in the district policy manuals varied. District 3 outlined a three-tier referral process, whereby problems were first addressed informally at the local school campus level (e.g., alternative instructional strategies or communicating information between home and school as appropriate), and then by a campus committee which gathered additional information and developed other alternatives within the school or classroom (e.g., referral for individual assessment for purposes other than special education placement). Finally, if it appeared that a referral to special education was appropriate, the referral committee met to make decisions as to the type and degree of assessment needed to determine appropriate educational alternatives for the student. This committee referred the student to designated professionals for the comprehensive individual assessment. District 2 reiterated state policy that referral data

gathered include evidence of previous educational efforts and strategies as well as the results of these efforts. In addition, however, if the student being referred were in kindergarten or first grade, documentation was required to show that: (a) The student had been given sufficient opportunity for learning, (b) curricula had been adjusted to meet the individual needs of the student, and (c) teaching strategies and their results were adequately documented to support the need for a referral. Campus personnel were held responsible for all remediation prior to the referral for special education.

Referral

In Texas, referral is a component of the first stage in the child-centered educational process, child identification. A referral may be made by the parent, physician, community agencies, other appropriate individuals, groups, organizations, or school personnel. Referrals may also be the result of district-wide testing or screening programs. In general, referral policies and procedures in the three districts paralleled sections of state statutes, federal laws and regulations, and the Texas Education Agency's Policies and Administrative Procedures for the Education of Handicapped Students (TEA, 1980). Variations included the specific responsibilities and activities assigned to those involved in the referral process and membership on referral committees.

Educational liaison. Across all districts, the referred student was to be assigned an educational liaison, designated by the principal, who became responsible for the collection of all data to be reviewed and considered in the referral process. The educational liaison was also required to participate in referral and ARD committee deliberations and decisions. In District 2, the liaison was further charged with serving as the student's advocate through the entire process.

The educational liaison presented the following information to the referral committee:

1. The student's current educational status, including attendance records, grades and other achievement data and classroom observations;

2. Previous educational efforts and strategies provided for the student and the results of those efforts;

3. Documentation of recent vision and hearing screening, including available reports from evaluations conducted by vision and hearing specialists as follow-up to the screening;

4. Updated health history inventory or documentation from recent medical evaluations identifying health or medical conditions that affected the student's current educational achievement; and

5. Information reported or provided by the parents.

State guidelines require the educational liaison be the referring agent for students currently enrolled in bilingual education. To give the teacher responsibility for gathering appropriate data, it must be assumed that this individual is knowledgeable about data required to make informed decisions about LEP children. It is suggested that such a responsibility is inappropriate

given (a) the lack of training and (b) the potential conflict of interest since the educational liaison is the person originating the referral. Moreover, the educational liaison was not required to have expertise in the education of language minority students. However, such expertise is important if the advocate is to help evaluate available data in light of unique student attributes including linguistic and cultural differences.

Referral Committees

When the educational liaison had gathered immediately available data, a referral committee meeting was held. Membership on this committee, as required by the TEA, included the educational liaison, the building principal or designated representative, regular educational support staff members, and other individuals at the discretion of the committee. The committee was to include members who were knowledgeable of the full range of placement alternatives, as this committee decided possible educational alternatives for each student considered. The referral committee was required to report its decision in writing, signed by all members, to the initial referral source within 30 working days from the time the initial referral was received.

All three district policy manuals reflected, albeit to varying degrees, desired professional practices related to the referral of students to special education. However, there was a lack of policy to help assure that language minority students were not referred to special education if speech or language characteristics were influenced by linguistic, cultural, economic, or other differences. Moreover, there were no guidelines for accommodating these student characteristics within the mainstream context prior to a referral, e.g., in the form of adaptations/alternatives to be attempted or data to be considered prior to a referral.

Assessment Policy and Practice

In examining district policies for the assessment of children suspected of having speech or language handicaps, two main areas were considered. Similarities and differences in assessment policies across districts were first identified. Secondly, policies were analyzed to determine whether those specific to the assessment of LEP children existed in any of the participating districts. All assessment policies were obtained from the districts' special education policy manuals. These questions provided the framework for analysis of assessment policies.

1. What policies govern the assessment process?

   a. What types of data must be gathered to determine the presence of a handicapping condition?

   b. Who conducts the assessments?

2. What special provisions are made for assessing language minority students?

Comprehensive Individual Assessment

In the three participating districts, assessments were conducted upon request of the referral committee, and produced the data considered by the Admission, Review and Dismissal (ARD) committee to determine student eligibility for special education. Districts documented the comprehensive individual assessment process and the personnel responsible for the assessment, in accordance with the federal and state regulations governing evaluation procedures.

The purpose of the comprehensive individual assessment was to determine the presence or absence of a physical, mental, or emotional disability which may contribute to a student's educational need; to determine the presence or absence of a significant educational deficit requiring special education instructional services; and to identify specific learning competencies in instructional and related service areas. The following areas were included as part of the individual assessment process.

1. **Assessment of language, physical, emotional/behavioral, sociological and intellectual functioning:**

a. Appraisal personnel must first determine the student's dominant language as state and federal laws require that all assessment instruments and procedures used be administered in that language. Assessments must consist of a formal or informal measure of language proficiency in both the expressive and receptive domains, such as oral expression, listening comprehension, reading comprehension and written language, when appropriate. Where no bilingual examiner is available, an interpreter may be used.

b. Assessment of an individual's physical factors (including psychomotor abilities) must consist of an examination of physical conditions which directly affect the student's ability to profit from the educational process. A general medical examination is required only when specified by eligibility criteria or when abnormal physical factors have been identified as part of the assessment of physical factors.

c. Assessment of emotional and behavioral factors must consist of formally or informally identifying those characteristics manifested in in-school or out-of-school behavior, or both, which may influence learning. The assessment must include behaviors relative to the handicap which may affect educational placement, programming, or discipline.

d. Assessment of sociological variables must consist of identifying the child's family and community environmental situation influencing learning and behavioral patterns. Students are not eligible for special education if the only deficiencies identified are directly attributable to a different cultural lifestyle or to not having had educational opportunities.

e. Assessment of intellectual functioning must include an assessment of verbal ability or performance or both. While the adaptive behavior of all students must be considered to some degree, formal measures of adaptive behavior are required only when a student is being assessed for mental retardation.

2. **Assessment of performance levels and competencies.** The purpose of the assessment of educational performance is:

a. To determine whether the student has academic, developmental, or behavioral deficits;

b. To provide information about the student's strengths and weaknesses; and

c. To identify the specific modifications of instructional content, setting, methods, or material required by the student to achieve and attain satisfactory progress, including those that can only be provided through special education services and those adaptations necessary for the student to progress in regular classes. Components of assessment of performance levels and competencies must include criterion-referenced assessment designed to aid in the development of the student's IEP.

3. **Assessment for related services.** Assessment for related services, including, for example, counseling, music, art, or speech therapy, must also be provided when appropriate and must include a written report demonstrating that the student meets eligibility criteria for these services. If the primary handicapping condition is a communication disorder, speech/language therapy is considered special education instruction. Speech therapy is considered a related service if the primary handicap is not a communication disorder.

District Policies

All three districts used the three stage model of assessment described in state regulations: (a) the assessment of physical, mental and/or emotional conditions to determine the presence or absence of a disability; (b) the assessment of educational performance levels; and (c) the assessment of learning competencies.

Data sources. The three districts differed in degree of specificity about sources of data at each phase of assessment described in their respective policy manuals. District 1 listed the areas; District 2 presented a list of data sources relevant to each stage, and appended a listing of appropriate instruments which could be used in conducting the comprehensive assessment; District 3 also suggested data sources, defined what was to be examined within each area of functioning using state guidelines, and specified who could carry out assessment procedures.

Stage 1 assessment. In District 2, the requirements for the speech and language assessment were more specific and were to include: (a) determination of language proficiency using a district and state approved measure; (b) collection of an oral language (expressive) sample; (c) administration and scoring of a receptive language measure, and/or an articulation test; (d) administration and scoring of the Peabody Picture Vocabulary Test (PPVT); (e) a diagnostic speech analysis (oral peripheral examination); and (f) any other tests judged appropriate, e.g., voice, fluency, auditory perception, and so forth (Speech, Hearing and Language Therapy Handbook, 1982).

District 3 differed from the other two districts in that it divided the language area into language and communication, and language dominance. The language dominance area involved determination of whether the student's dominant language was other than English and was to be assessed by "bilingual school professionals." The language and communication area encompassed expressive and receptive skills, and was to be assessed by a speech/language teacher or a member of the psychological services staff.

Stage 2 assessment. The second stage of assessment was the determination of educational performance levels. The purpose of this stage was to ascertain whether or not a significant educational deficit, and therefore a significant need for special education, existed.

Stage 3 assessment. Stage 3 of the assessment model used by the three districts consisted of the identification of learning competencies in the areas of educational need. The purpose of this stage of assessment was to provide the ARD committee with recommendations to be used in formulating the Individual Educational Program (IEP). In Districts 2 and 3, assessment of learning competencies was to include criterion-referenced or competency-based measures or information.

Timelines. The timelines for assessment were consistent with state policy but differed slightly in implementation. District 1 stated that the comprehensive assessment must be completed within 20 school days of the referral committee meeting. Districts 2 and 3 did not specify a completion date for the assessment per se, but required that the ARD meet within 30 school working days of the date of referral for comprehensive assessment. Since the results of the comprehensive assessment were to be available for the ARD committee to consider, differences in timelines are not significant.

Personnel responsible. All districts assigned the major responsibility for the gathering and synthesis of assessment data to the speech, hearing, and language therapist, although some parts of the assessment (e.g., sociological or achievement testing) could be carried out by other personnel (e.g., visiting teachers or counselors). Assessments were to be conducted only by individuals qualified to conduct the required testing, interviews, or observations. Only District 3 required that bilingual personnel be involved in any part of the comprehensive assessment. In this district, language dominance assessment was to be carried out by "bilingual school personnel."

All districts required that an appraisal representative be present at the ARD committee meeting. District 1 required that an appraisal representative also be present at the referral committee meeting while in the other two districts, participation of the appraisal representative was optional. Finally, all three districts specified that a written report of the comprehensive assessment, prepared by an appraisal person, become a part of the child's eligibility folder.

Policy Versus Practice

For the most part, district practices appeared to conform to their own policies and to state and federal guidelines in the area of assessment. Perhaps the most important conclusion to be drawn from the examination of assessment policies and practices is that there was a general lack of policy which

dealt with the special needs of the handicapped LEP child. Little current language proficiency testing was available for LEP children or proficiency in the native language was not adequately examined. However, proficiency in a first language is an important diagnostic clue for LEP children. If children are progressing normally in the acquisition of their first language, they cannot be classified as communication disordered. Districts did not fully document language of administration for all tests, nor did they record how the language of administration was selected. Assessments examined also lacked full descriptions of how testing procedures were adapted and/or how norms were modified when testing in a language other than English was conducted. Policies need to be formulated to ensure that assessment information will allow comparisons of English and native language skills to be made routinely.

Placement Policy and Practice

The assessment process culminated in a meeting of the Admission, Review, and Dismissal Committee. This committee determined whether the child was handicapped and whether s/he needed specialized instructional services. In analyzing district policies related to special education placements of language minority students, the following questions were considered:

1. What policies govern special education placements?

   a. Who must be involved on placement committees?

   b. What adaptations of this process occur when the student being considered is limited English proficient?

2. What assurances are provided that a student's problems are not the result of differences of language, culture, socioeconomic status, or to not having had opportunities to learn?

The specific responsibilities given to campus level Admission, Review, and Dismissal committees were virtually identical across the three districts and, for the most part, reiterated state policy. These committees were to:

1. Review all available data including written reports of the three stages of the individual assessment, current information provided by the parent and/or the student, and information, records, and work samples provided by school personnel;

2. Determine whether the student met eligibility criteria because of a handicapping condition, in combination with a significant educational deficit;

3. Designate the primary handicapping condition and any secondary handicapping conditions, if appropriate;

4. Prepare a written summary of the committee's discussions and recommendations, including dates and signatures;

5. Recommend the appropriate instructional placement for the student;

6. Determine the amount of time the student was to spend in special education, related services programs, or in other placement options;

7. Assure that students were not placed in special education solely because of a different language background, culture, lifestyle, or lack of previous educational or cultural opportunities;

8. Initiate development of an individualized educational program or modify existing IEPs;

9. Conduct annual reviews of student progress and determine whether students continued to be eligible for special education services.

In addition to the above responsibilities, District 3 further charged the ARD committee to function as a problem solving group and to plan alternatives for students who were determined not to qualify for special education.

Committees were required to make decisions regarding referred students within 30 calendar days of regular work responsibilities, from the time of the referral committee report. This timeline was consistent across the three districts.

The requirement that assurances be provided that students were not placed in special education because of individual differences of language, culture, etc., was the only policy that was specific to language minority students across the three districts. There were no specific guidelines regarding compliance with this requirement.

ARD Membership

The placement decision was to be made by a team of individuals who are knowledgeable about the student, competent in interpretation of evaluation results, aware of placement options, and who have the authority to allocate personnel and resources to meet the unique needs of students. The Admission, Review, and Dismissal Committee included, at a minimum, a representative of (a) instruction, (b) appraisal, (c) administration, (d) the child's parent, and (e) the child, if appropriate. All three districts had provisions for participation of others, as appropriate. For example, specialized personnel were required to be present when the student being considered was auditorally or visually handicapped. Only District 3 articulated that when a child was eligible for compensatory programs, representatives from these programs (Title I, migrant education, bilingual education, etc.) should be included on the ARD committee.

Summary

The special education policy manuals used by the three participating school districts reflected the general mandates of P.L. 94-142 and of state laws governing services to the handicapped. District policies included the broader procedural safeguards assuring nondiscrimination in referral, assessment, and placement and the requirement that districts certify that students' problems were not the result of differences of language, culture, socioeconomic status, lifestyle, or to not having had opportunities to learn. However, there was little elaboration in district manuals as to how to implement these safeguards

when the student being considered for possible special education placement was limited English proficient. This, again, is likely a reflection of the state of the art in bilingual special education. The chapter which follows offers preliminary recommendations for delineating policy and improving practice to assure that handicapped limited English proficient students are not inappropriately placed in special education.

VI

RECOMMENDATIONS FOR POLICY, PRACTICE AND RESEARCH

While mandates aimed at assuring that handicapped LEP students receive an appropriate education are embodied in policy, law, and judicial decisions, (e.g. P.L. 94-142; Diana v. the State Board of Education, 1970; Lau v. Nichols, 1974), districts need guidance to effectively implement existing safeguards. Procedures must be developed which (a) help distinguish normal from handicapped students, (b) yield a non-biased assessment, (c) assure due process in decision-making, and (d) result in instructional programs which help truly handicapped students achieve their potential. This chapter is an initial attempt to delineate areas in which policies are required and to offer suggestions to improve services for limited English proficient students served in programs for the communication disordered.

Native Language Assessment

It appears that the lack of specific policy regarding the implementation of the mandate to test children in their dominant language results in large numbers of LEP students being tested in English. The net result of this practice is that limited English proficient students are served in speech and language therapy even though the presence of a handicapping condition cannot be ascertained because the necessary data to compare native language and English language competence is missing. It is possible, then, that precious resources are being diverted from handicapped students to help normal students acquire English as a second language.

Language dominance and proficiency. Every language minority child referred to special education should receive a language dominance and proficiency assessment before other tests are administered. These data are critical to all other steps in the special education process in that they help determine the language(s) of testing, the instruments and procedures to be used, and guide selection of appropriate interventions and recommendations about the language(s) of therapy for eligible students. This assessment should be conducted prior to the meeting of the referral committee to rule out the possibility that language behaviors are indicative of limited English proficiency. If already available test results are used, these should be less than six months old so that they reflect the student's current level of functioning. Results of language dominance and proficiency assessments help assure that students are tested in their stronger language if a comprehensive assessment is recommended.

Analysis of pragmatic skills. Assessment results included in this report indicate an emphasis on measuring discrete language skills (e.g., vocabulary, phonology, syntax, etc). However, limited English proficient students, precisely because they are in the process of acquiring English, are likely to perform poorly on these tests and to be judged eligible for speech language services on the basis of developmental errors characteristic of linguistic differences, not handicapping conditions. The first priority for the speech/language evaluation should be to assess children's pragmatic skills; that is, how

effectively they participate in communication interaction. Discrete point tests can then be used to pinpoint specific deficits if the pragmatic measures indicate disordered communication processes. Many speech pathologists already obtain language samples as part of the assessment battery. A shift away from analyzing these samples from the perspective of structural correctness to analysis of communication interactions, as recommended by Damico (1985), would provide data appropriate for assessing pragmatic skills.

Test adaptations. Because of the limited availability of appropriate assessment instruments, speech pathologists frequently resort to adapting available instruments and procedures. If the procedures under which the test was administered or scored violate the original standardization, scores should not be reported as valid indicators of a child's functioning. All reports of speech and language assessments should describe adaptations of accepted procedures and state that caution must be exercised in the interpretation of test data. Otherwise, school personnel and parents may grossly misinterpret scores because they are not properly explained by the examiner.

Eligibility Criteria

State education agencies should develop special education eligibility criteria which are specific to language minorities. Determining eligibility for language minority students is not as simple as determining whether students meet criteria which define limited English proficiency and then to determine whether this same student meets eligibility criteria for special education. For LEP students, tests used to determine special education eligibility must also verify that the disorder is manifested in the native language, not only in English. If the problem occurs only in English, it is not a handicapping condition.

Appraisal Personnel

The preceding recommendation suggests that evaluations for the purpose of determining special education eligibility should, except in the most unusual of circumstances, be conducted by someone who is fluent in the students' language and trained in assessment of linguistically and culturally different students. Local education agency personnel must, at a minimum, be required to document good faith efforts to secure the services of bilingual speech pathologists who are trained to evaluate LEP students. Such documentation could include, for example, description of efforts to locate and contract services of bilingual assessors or a written affirmative action plan to hire bilingual speech pathologists as vacancies occur. If bilingual therapists are not available, monolingual therapists must be provided formal training specific to evaluation of language minorities before they are approved to assess these students. State departments of education should develop minimum requirements for such training.

The fact that so few qualified bilingual speech pathologists are available underscores the need to train such personnel. This is a manpower need which must be addressed by institutions of higher education as well as by local education agencies. Training to meet this need will require two foci: (a) development of training programs in bilingual speech pathology, and (b) development of training sequences for monolingual speech pathologists as they

comprise the majority of currently employed therapists as well as of students in university speech pathology personnel preparation programs.

Placement Committees

A bilingual individual with expertise in the education of language minority students should participate on placement committees. Since federal and state regulations require participation of an appraisal representative on these committees, the bilingual speech pathologist would be an appropriate representative as s/he would have the requisite knowledge to interpret assessment data for other committee members. If the district does not have bilingual assessment personnel, a bilingual special educator, a bilingual educator, or another bilingual professional should serve on the placement committee. However, being bilingual or a member of an ethnic or language minority group does not, in and of itself, qualify an individual as an appropriate committee member. Rather, representatives must have training and experience specific to the interaction of handicapping conditions and language proficiency.

Referral and placement committees should also include representatives from all programs in which the child is being served (e.g., bilingual education or ESL programs). Representation of such personnel would help assure that services are coordinated and that goals and objectives addressed by respective programs are consistent with both the handicapping condition and other unique needs. The position or role of all participants should be clearly specified on required reporting forms.

Recommendations for Research

The research base related to speech and language handicapped students who are also limited English proficient is so sparse that almost any question posed about identification, assessment, or instruction is worthy of investigation. Of utmost importance, however, is research which focuses on helping educators understand the process of normal language acquisition, in the native and in English as a second language, and how this process can be disrupted by speech and/or language disorders. The following are recommended lines of inquiry:

1. Research activities focused at the prereferral stage can help educators more accurately determine which students should be referred for speech and language evaluation. One outcome of these efforts might be screening instruments which can be used by teachers and/or therapists to identify high risk students. Investigations of this nature can also help determine whether the recipients of services through these programs are indeed handicapped or whether they are normal students in the process of acquiring second language skills.

2. There continues to be a need for longitudinal studies of Spanish language acquisition among native-born Hispanic students to document developmental milestones in phonology, morphology, syntax, grammar, vocabulary and language use. It is these developmental norms against which

children's language skills are compared in determining the presence or absence of handicapping conditions.

3. There is also a need to investigate how exposure to a second language influences native skill development and vice versa. The complexity of studying dual language acquisition is somewhat staggering, given the magnitude of variables which influence this process including those such as age of acquisition, motivation, relative language proficiency in the first and the second language, etc. Nonetheless, such studies are critical to understanding the interaction effects of language proficiency and handicapping conditions.

4. Studies describing speech and language characteristics of students identified as speech and/or language disordered are also required. These studies would be helpful, for example, in distinguishing normal from abnormal language acquisition and for distinguishing language disorders from learning disabilities. The latter distinction is important to developing effective interventions.

5. While studies of articulation and language development are the most critical because these are the most common speech/language handicaps, there are few investigations of lower incidence problems such as stuttering and voice impairments. The same is true in relation to other syndromes such as deafness, autism, cerebral palsy, and so forth.

6. Investigations of language attrition and language loss are important to the diagnostic process. LEP students who experience language loss demonstrate test performance similar to those of children with language disorders (Mattes & Omark, 1985). Procedures for assessing levels of attrition or loss must be developed to distinguish language loss from language disorders.

7. Procedures for analyzing codeswitching or language mixing are also limited. Current assessment procedures do not accommodate codeswitching as a communication style. Consequently, these instruments yield measures of English or Spanish skills in isolation and, therefore, do not accurately describe students' communication competence.

8. There has been a shift of emphasis from sole reliance on discrete skills assessments to incorporating pragmatic criteria in speech/language evaluations. Procedures which focus on pragmatic skills, such as those recommended by Damico (1985), must be further validated. While Damico's criteria have been shown to be effective in the screening process, how these or similar procedures can be used and interpreted in the diagnosis of speech and language disorders must be investigated further.

9. The most frequent criticism of procedures used to assess language use or function is that it is difficult to train individuals in the use of these procedures and that they are very time consuming. Studies to determine the most effective procedures in terms of accuracy of diagnostic processes, time, and feasibility of training would be a helpful contribution to the speech pathology field.

10. A related line of inquiry involves the investigation of the most efficacious ways of obtaining language samples (e.g., observation of spontaneous conversations, structured interviews, storytelling or retelling, etc.).

11. While the literature suggests that using spontaneous language samples is the most effective means for assessing communicative competence, tests of discrete skills are also important to the diagnostic process. These tests allow one to describe the processes affected and to prescribe interventions in identified areas of need. Currently, there are ample numbers of tests of English language skills but these tests frequently do not include norms appropriate to Hispanic students. These tests should be standardized for these populations and particularly for native-born students from lower socioeconomic status environments who comprise the majority of limited English proficient and bilingual students. Only a limited number of Spanish language instruments are available. The development of such instruments should be a priority for the field. One aspect of this development effort should be to improve existing language dominance and proficiency tests.

12. Studies of assessment outcomes are also warranted. Comparison of students' eligibility when they are tested in the native language versus when they are tested in English should be made. Similar studies of differences in assessment outcomes when testing is conducted by monolingual therapists versus monolingual therapists who have received training in second language acquisition and in interpreting assessment results for LEP students should also be conducted. Similar studies of outcomes with trained versus untrained bilingual speech pathologists should be incorporated into this line of inquiry so that educators do not make the mistake of assuming that bilingualism, in and of itself, will result in non-discrimination in the assessment process.

13. Data about speech/language therapy programs and their effectiveness for second language learners are virtually non-existent. A study of LEP LD Hispanics at the point of their 3-year reevaluation (Wilkinson & Ortiz, 1986) indicated that the verbal and full scale IQs of these students declined and their achievement levels maintained at the same level as that at initial placement. The authors concluded that special education services, without accommodation of students' LEP status, will be fruitless. The outcomes of speech/language therapy provided in the native language, bilingually, using English as a second language strategies, or delivered solely in English must be documented.

14. Decisioning models must be developed which provide a framework for interpreting the complex interactions of student characteristics (e.g., language, culture, socioeconomic status) and indicators of possible handicapping conditions in order to determine special education eligibility.

15. Replications of this study in districts of varying size, location, and ethnic composition are needed to expand the data base on communication disordered students in Texas and across the nation to improve the generalizability of findings.

Summary

Data captured from eligibility folders revealed that procedures used by districts when LEP students were considered for special education placement were essentially the same as those used for monolingual English-speaking students. Language status was given little attention by assessment personnel or by placement committees. It was not possible to determine whether the subjects were speech or language disordered or whether difficulties were the

result of their lack of English proficiency because limited testing in Spanish was conducted. These findings are a reflection of the state of practice in the emerging field of bilingual special education.

The literature suggests that it is not possible for a child to have a language disorder in English if the disorder is not manifested in the native language (Juarez, 1983). While there is a lack of trained bilingual speech pathologists, there are available trained bilingual educators and second language specialists whose professional judgments should be incorporated into the special education decisioning process. The costs of incorporating the judgments of bilingual professionals, or of contracting the services of a bilingual examiner, are justifiable given the exorbitant costs of providing special education services for normal students and the negative consequences of diminished services for the truly handicapped.

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